

**CALIFORNIA'S SACRAMENTO-SAN JOAQUIN  
DELTA: PLANNING AND PREPARING FOR  
HAZARDS AND DISASTERS**

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**(112-99)**

**FIELD HEARING**  
BEFORE THE  
SUBCOMMITTEE ON  
ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS, AND  
EMERGENCY MANAGEMENT  
OF THE  
COMMITTEE ON  
TRANSPORTATION AND  
INFRASTRUCTURE  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED TWELFTH CONGRESS  
SECOND SESSION

AUGUST 16, 2012 (Stockton, California)

Printed for the use of the  
Committee on Transportation and Infrastructure



Available online at: [http://www.gpo.gov/fdsys/browse/  
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U.S. GOVERNMENT PRINTING OFFICE

75-571 PDF

WASHINGTON : 2012

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**U.S. House of Representatives**  
**Committee on Transportation and Infrastructure**  
Washington, DC 20515

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August 10, 2012

**BRIEFING MEMORANDUM**

**TO:** Members of the Subcommittee on Economic Development, Public Buildings and Emergency Management  
**FROM:** Subcommittee on Economic Development, Public Buildings and Emergency Management Staff  
**SUBJECT:** Oversight Field Hearing on "California's Sacramento-San Joaquin Delta: Planning and Preparing for Hazards and Disasters"

**PURPOSE**

The Subcommittee on Economic Development, Public Buildings and Emergency Management will meet on Thursday, August 16, at 9:30 a.m. at the San Joaquin Council of Governments Building located at 555 East Weber Avenue in Stockton, California to receive testimony from the Federal Emergency Management Agency (FEMA), the California Emergency Management Agency (CalEMA), a county emergency manager, and public utilities. The purpose of the hearing is to examine planning and preparedness in the Sacramento-San Joaquin Delta region.

**BACKGROUND**

*Federal Emergency Management Agency: History*

FEMA was established in 1979 by Executive Order by President Carter following a number of massive disasters in the 1960s and 1970s which resulted in proposals by the National Governors Association and others to streamline and cut the number of agencies States were required to work with following a disaster. Prior to the creation of FEMA, the federal government's emergency response mechanisms were scattered among many agencies throughout the government. The creation of FEMA helped to centralize these authorities and the coordination of the federal government's response to a disaster. FEMA's primary authority in carrying out its emergency management functions stems from the Robert T. Stafford Disaster

Relief and Emergency Assistance Act (Stafford Act).<sup>1</sup> Following more than two decades as an independent agency, the Homeland Security Act of 2002 (P.L. 107-296), which created the Department of Homeland Security (DHS), placed FEMA within DHS, and FEMA's functions were dispersed among various offices and directorates of DHS.

In 2005, Hurricanes Katrina and Rita devastated the Gulf Coast. Following Hurricanes Katrina and Rita and the poor response that occurred, several investigations and congressional inquiries and hearings took place to examine the preparation for, response to, and later recovery from these hurricanes. In particular, the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina was formed and culminated in the issuance of a report entitled, "A Failure of Initiative: The Final Report of the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina" on February 15, 2006.

Following the issuance of this report, Congress enacted the Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA) (P.L. 109-295), which put FEMA back together again within DHS. PKEMRA authorized the National Preparedness System and, among other things, FEMA for the first time in legislation. Legislation pending this Congress, H.R. 2903, the FEMA Reauthorization Act, would reauthorize FEMA and other FEMA programs and includes various reforms to cut costs and streamline the response and recovery processes following a disaster. That legislation was favorably reported by the Committee on March 8, 2012.

#### *Disaster Assistance Programs*

FEMA's major Stafford Act programs for disaster response and recovery in the aftermath of a major disaster are in the Public Assistance Program and the Individual Assistance Program. The Public Assistance Program, authorized primarily by sections 403, 406, and 407 of the Stafford Act, reimburses state and local emergency response costs and provides grants to state and local governments, as well as certain private non-profits to rebuild facilities. The Public Assistance Program generally does not provide direct services to citizens.

The Individual Assistance Program, also known as the Individuals and Households Program, is primarily authorized by section 408 of the Stafford Act. The program provides assistance to families and individuals impacted by disasters, including housing assistance. Housing assistance includes money for repair, rental assistance, or "direct assistance," such as the provision of temporary housing.

Section 404 of the Stafford Act authorizes the Hazard Mitigation Grant Program (HMGP). HMGP provides grants to state and local governments to rebuild after a disaster in ways that are cost effective and reduce the risk of future damage, hardship, and loss from natural hazards. FEMA also provides grants under HMGP to assist families in reducing the risk to their homes from future natural disasters, through such steps as elevating the home or purchasing the home to remove it from the floodplain.

The Pre-Disaster Mitigation (PDM) program provides funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the

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<sup>1</sup> 42 U.S.C. §§ 5121-5207.

implementation of mitigation projects prior to a natural disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing future disaster assistance payments. Congress reauthorized PDM last congress in the Pre-Disaster Mitigation Act of 2010 (P.L. 111-351).

#### *Disaster Relief Fund (DRF)*

The Disaster Relief Fund (DRF) is the primary account used to fund many of the FEMA disaster assistance programs for States and local governments and certain nonprofits following a declared disaster or emergency. In most cases, funding from the DRF is released after the President has issued a disaster declaration. The funds in the DRF are appropriated by Congress and, generally, the Administration requests in its budget submission to Congress an estimated amount needed for disasters for that fiscal year. FEMA only includes in its annual budget requests for the DRF funds expected to be needed in a given year, so, for example, there may be future liabilities for past disasters that are not captured in a given year's budget request if those expenses are not expected to become due in that fiscal year. The Administration typically excludes in its calculation "catastrophic" disasters, defined in this context as those exceeding \$500 million in costs. As a result, if large-scale disasters do occur or there are more disasters than anticipated, a supplemental appropriation is requested for those costs.

If there are concerns in a given year with the amount of DRF funds, FEMA may institute Immediate Needs Funding to slow the rate of expenditures from the DRF until supplemental funds can be approved by Congress. When Immediate Needs Funding is instituted, FEMA will focus its funding on Individual Assistance and certain Public Assistance programs such as debris removal, emergency protective measures, as well as essential joint field office operations. Projects to rebuild or recover from disasters are put on hold until additional funds are appropriated.

#### *Disaster Declarations*

When state and local resources are overwhelmed and the "disaster is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected local governments,"<sup>2</sup> the Governor of the affected State may request that the President declare a major disaster. If the President issues a declaration, federal resources are deployed in support of state and local response efforts.

There are two categories of incidents included in the Stafford Act – "major disasters" and "emergencies". A "major disaster" is defined under the Stafford Act as:

Any natural catastrophe (including any hurricane, tornado, storm, high water, winddriven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this chapter to supplement the efforts and available

<sup>2</sup> Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. § 5170.

resources of states, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.<sup>3</sup>

An “emergency” is defined as:

Any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.<sup>4</sup>

The key distinction between a major disaster and emergency is that emergencies authorize fewer types of assistance and do not require a state level disaster declaration or a request from a governor. In addition, emergencies are typically less severe events, limited in cost or can be declared to “lessen or avert the threat of a catastrophe.”<sup>5</sup>

In 2011, the President issued 99 major disaster declarations and 29 emergency declarations. The costs of these disasters can be significant.

#### *Preparedness and the Sacramento-San Joaquin Delta*

The Sacramento-San Joaquin Delta is located between Sacramento on the north and Stockton on the south and includes over 1,000 miles of waterways. The primary contributing rivers are the Sacramento River and the San Joaquin River. Since the 1800s, the process of reclamation of land which had been marsh land has today resulted in more than 1,100 miles of levees. Since that time, portions of reclaimed lands behind the levees have sunk below sea level. There are ongoing concerns of threats of flooding in the region. A major disaster in the area, such as an earthquake, could result in significant impacts to the water supply and infrastructure and cause significant flooding to farmlands and communities from levee failures. The Delta is also the main hub for delivering fresh water to millions of California residents in the San Francisco bay area and southern coastal communities of the state, along with millions of acres of farmland in the San Joaquin Valley.

Pursuant to legislation passed by the California legislature and approved by the Governor on September 30, 2008, the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force, led by CalEMA, was established. The legislation required the Task Force to (1) make recommendations relating to the creation of an interagency unified command system; (2) coordinate the development of a draft emergency preparedness and response strategy for the Delta region, and (3) develop and conduct all-hazard emergency response exercises and training in the Delta. Two goals were developed by the Task Force: (1) improve the quality and effectiveness of all-hazard emergency response in the Delta region; and (2) maintain a level of readiness consistent with identified threats and current capabilities.<sup>6</sup>

<sup>3</sup> 42 U.S.C. § 5122.

<sup>4</sup> Id.

<sup>5</sup> 42 U.S.C. § 5122.

<sup>6</sup> Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report, January 2012.

The Task Force produced recommendations related to the priorities identified in the following areas:

- Interagency Unified Command System Organizational Framework
- Emergency Preparedness and Response Strategy
- Exercise and Training
- Preparedness Strategy and Funding Sources

To ensure appropriate planning and preparedness, a number of recommendations require coordination and planning on all levels of government – including FEMA, CalEMA, and local jurisdictions. The purpose of the hearing is to examine the potential threats to the Delta region, the steps taken to prepare for and plan for a disaster, and identify the ways in which each level of government can support and facilitate planning and preparedness in the Region.

**WITNESSES**

Mr. Robert J. Fenton, Jr.  
Assistant Administrator for Response  
Office of Response and Recovery  
Federal Emergency Management Agency

Mr. Brendan Murphy  
Assistant Secretary  
California Emergency Management Agency

Mr. Ronald E. Baldwin  
Former Director of Emergency Operations  
San Joaquin County

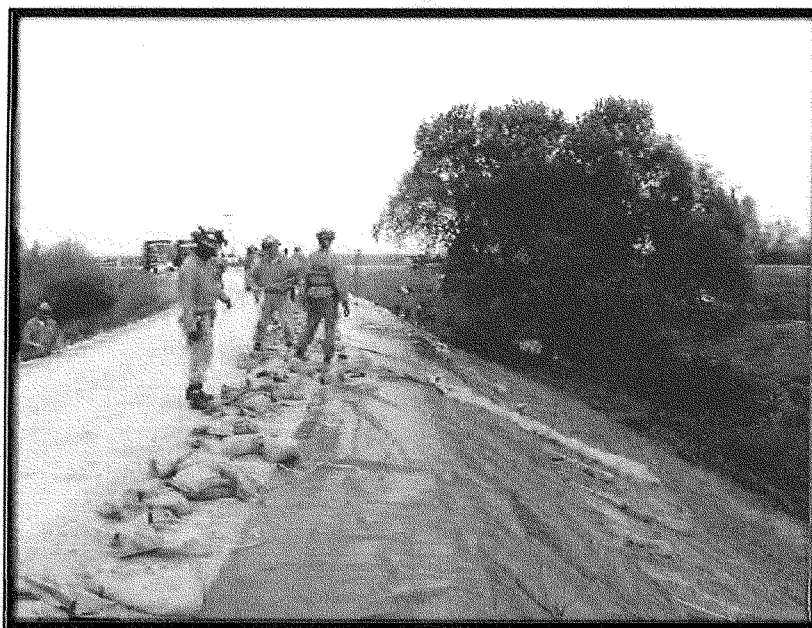
Mr. Timothy Alan Simon  
Commissioner  
California Public Utilities Commission

Mr. Alexander Coate  
General Manager  
East Bay Municipal Utility District



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## Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report January 2012



An emergency preparedness and response strategy for the Delta region with specific recommendations to the Governor and the Legislature as directed by the Sacramento-San Joaquin Delta Emergency Preparedness Act of 2008.



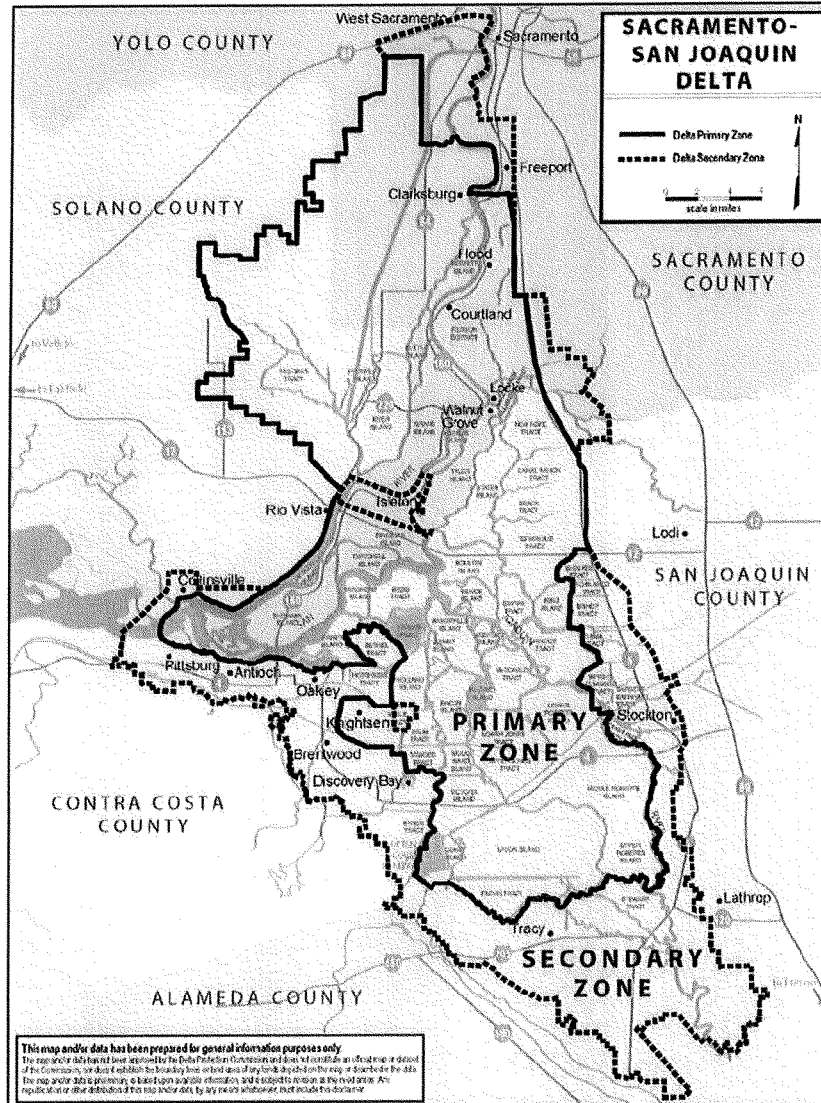
**Cal EMA**  
CALIFORNIA EMERGENCY  
MANAGEMENT AGENCY



DELTA PROTECTION COMMISSION



# Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report



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**Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report**

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**Purpose**

This report meets the requirements of the Sacramento-San Joaquin Delta Emergency Preparedness Act of 2008 (Senate Bill 27-Simitian). It provides specific recommendations to the Legislature and Governor for the creation of a Delta interagency unified command system, an emergency preparedness and response strategy and an exercise/training plan. This report also provides funding recommendations for implementation of the actions contained within.

**Background**

Senate Bill 27 (SB27) was approved by the Governor and filed with the Secretary of State on September 30, 2008.

The bill required the Office of Emergency Services (OES), now called the California Emergency Management Agency (Cal EMA), upon receipt of appropriate funding, to establish until January 1, 2011 the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force. Led by Cal EMA, the Task Force consisted of representatives from the Delta Protection Commission, Department of Water Resources (DWR) and a single representative of the following Delta counties:

- Contra Costa
- Sacramento
- San Joaquin
- Solano
- Yolo

The specific action recommendations contained in this report have been approved by the Task Force members.

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Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report

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**SB 27 Requirements**

The Task Force was directed to:

- Make recommendations to the Secretary of Cal EMA relating to the creation of an interagency unified command system organizational framework, in accordance with the guidelines of the National Incident Management System (NIMS) and the Standardized Emergency Management System (SEMS).
- Coordinate the development of a draft emergency preparedness and response strategy for the Delta region for submission to the Secretary of Cal EMA. Where possible, the strategy shall utilize existing interagency plans and planning processes of the involved jurisdictions and agencies that are members of the Delta Protection Commission.
- Develop and conduct all-hazard emergency response exercises and training in the Delta that are designed to test or facilitate implementation of regional coordination protocols.

**Task Force Funding**

The funding called for in SB27 to establish the Task Force and develop this report was never provided. Despite the lack of funding, Cal EMA, the Delta Protection Commission, DWR and appropriate operational areas considered this report important enough to redirect staff to form the Task Force. To complete the report, the Task Force drew upon work completed in previous regional planning efforts (see below). It is important to note that funding for the implementation of Task Force recommendations contained in this report will be critical to achieving the goal of improved Delta emergency response.

**Prior Work**

Recommendations contained in this report draw on previous joint emergency planning specific to the Delta region. The following documents were referenced:

- *Basis for Regional Flood Response Planning (April 2008) - Sacramento-San Joaquin Delta Flood Response Group*
- *Delta Vision Strategic Plan (October 2008) - Governor's Blue Ribbon Delta Vision Task Force*

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Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report

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**Delta Region Strategy Goals**

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The following goals were identified by the Task Force and are supported by the specific action recommendations contained in this report.

- Goal 1: Improve the quality and effectiveness of all-hazard emergency response in the Delta region.
- Goal 2: Maintain a level of readiness consistent with identified threats and current capabilities.

**Action Recommendations: Interagency Unified Command System Organizational Framework**

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- Implement a common regional Interagency Unified Command Organizational Framework. Develop a protocol that all jurisdictions and agencies at all levels of government operating in the Delta in an emergency will use to establish joint field incident commands for flood fight operations and other emergency response functions.
- Adopt and Implement a Delta Multi-Agency Coordination System (MACS) consistent with SEMS/NIMS to address regional resource management and prioritization during multi-jurisdictional emergencies specifically for the Delta. The Delta MACS shall include common operating principals, a defined operating region, core regional policies and examples of operational methodologies. The development of the Delta MACS shall include levee maintaining agencies, cities, operational areas, state and federal agency resources. Funding will need to be established for the development of procedures and communications that allow implementation of the Delta MACS.

**Action Recommendations: Emergency Preparedness and Response Strategy**

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- Coordinate the identification of potential threats and consequences associated with natural and human-caused hazards affecting the Delta region.
- Identify emergency planning and response authorities, capabilities and specific roles for all governmental agencies involved in emergency response in the Delta.
- Adopt and implement a Regional Mass Evacuation Plan. Continue current efforts by Cal EMA and operational areas to complete an Inland Region Regional Mass Evacuation Plan. Design and execute a regional mass evacuation plan functional exercise within the next two years.

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Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report

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- Develop and implement a Delta region specific Interoperability Communications Plan that supports communication between emergency response agencies including, but not limited to, local maintaining agencies, cities, operational areas, state and federal agencies. The plan shall consider existing communications resources and procedures and develop redundant means of communication between agencies. The plan should consider stakeholder needs and priorities and identify specific equipment, infrastructure and training.
- Actively participate in federal and state flood and evacuation contingency mapping projects. Projects to develop flood contingency and evacuation maps for the Delta are in progress or planned by local, state, and federal agencies. This sustained effort will collect critical data and pre-plans and then use advanced mapping technology to display the information to improve future emergency operations. Local jurisdictions need resources to adequately continue their participation in these efforts.
- Develop a Sacramento-San Joaquin Delta Catastrophic Flood Incident Plan that will be the basis for integrated response within the Delta. This plan will incorporate the specific action recommendations contained in this report and any further joint regional protocols that may be warranted and mutually agreed upon.

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**Action Recommendations: Exercise and Training**

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- Conduct Golden Guardian 2011 as an all-hazard, multi-agency, emergency response exercise in the Delta. To extent possible, the Delta regional emergency response agencies should use Golden Guardian 2011 to test existing emergency response plans and policies. Agencies should participate in the exercise in a manner that assesses agency roles and responsibilities.
- Develop and conduct all-hazard emergency response drills and exercises that test multi-agency coordination on an annual basis. Agencies that respond or support emergency response activities in the Delta region should develop and submit a three year exercise plan to Cal EMA annually. Exercise plans should include at least one multi-agency communication drill and a response exercise annually. Agencies should design and conduct drills and exercises annually and document needed and desired improvements in a multi-agency improvement plan. Communication drills should test multiple modes of communication between agencies and agencies with enhanced or improved communications systems. Exercises should alternate between table top exercises, drills, functional and full scale field exercises.
- Emergency Management Policy Development Training. Cal EMA, in collaboration with emergency response agencies in the Delta region, shall develop a training

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**Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report**

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plan that provides local, state and federal policy makers with the information necessary to effectively create and implement emergency management policies, plans and procedures. The training plan shall include: the history and background and specific information on various past all-hazard emergencies for the Delta region; the roles and accountability of local, state and federal response agencies in preparing for and responding to emergency situations; an overview of related policies and procedures, estimated potential expenses and the current status of major emergency response improvement projects in the Delta region. The training plan shall also include a policy maker communication and outreach component to facilitate disseminating emergency response information directly to policy makers and their staff. This component will provide access to various resources such as web-based training, written and oral presentations, other related training materials, and links to pertinent training opportunities to help educate agencies about developing and maintaining multi-agency emergency response plans and procedures. Consideration should be given to coordinate the policy makers outreach/training schedule with other emergency response training and exercise schedules. To the extent possible, this component should encourage policy makers to participate in SEMS Executive Training.

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**Possible Funding to Ensure Immediate Emergency Actions**

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In California, reclamation districts are currently the public agencies with primary jurisdictional responsibility for maintaining levees before and during a flood emergency. This decentralized reclamation district response system works well and should be continued to ensure the best possible response when the integrity of multiple levees is threatened. However, local reclamation districts often lack access to ready cash to fund significant engineering response. Districts are unable to raise funds via loans or other means after an emergency begins to fund emergency actions.

Other local, state and federal agencies that could provide the needed engineering response are often delayed by the same lack of ready appropriations in their budgets. Another factor that delays action is the lack of clear eligibility for reimbursement when these other agencies act on behalf of the reclamation districts. In order to minimize the losses from flood events, the Task Force recommends developing an emergency funding mechanism that would ensure response to identified threats to levee integrity by the agency best placed to take the needed action. This new response mechanism could be developed in coordination with FEMA to ensure eligibility for post-disaster assistance. Potential programs to be explored as the basis for this new protocol could include, but are not limited to:

- Revising the California Disaster Assistance Act to enhance Cal EMA's ability to advance funds for response efforts

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**Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report**

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- A flood response fund maintained and managed by the Department of Water Resources' Flood Operations Center
- A collaborative effort between Cal EMA and FEMA to develop an independent Delta all-hazard emergency response fund

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**Preparedness Strategy and Funding Sources**

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The initial projects to set the Delta preparedness strategy in motion are:

- Develop and implement the Sacramento-San Joaquin Delta Catastrophic Flood Incident Plan including the establishment of joint command, flood fight, and evacuation resource stockpiles.
- Develop and implement the Delta Multi-Agency Coordination System.
- Implement Delta region communications plans, systems and capabilities.
- Develop GIS data and systems, information collection, and joint pre-event decision making for flood and evacuation

There are several potential sources of existing funds for this Preparedness Strategy. The Task Force requests legislative and executive support for actions towards joint applications by Delta region stakeholders to the following funding programs available currently or in the near term:

- Department of Water Resources Flood Emergency Response Projects Direct Grants Program funded by Proposition 84 Bonds;
- FEMA Catastrophic Incident Preparedness Grant Program;
- CAL FED Levee Stability Program authorized through Section 3015 of the Water Resource Development Act of 2007;
- FEMA Pre-Event Mitigation Grant Program;
- Department of Homeland Security Grant Program.

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**Conclusion**

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The composition of the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force includes the jurisdictions most likely to be impacted by Delta emergencies. These jurisdictions have the experience and the best expertise necessary to address emergency planning in the Delta. The strategy and recommendations presented here support the stated goals of improving the quality and effectiveness of all-hazard emergency response in the Delta region and maintaining a level of readiness consistent with identified threats and current capabilities.



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**Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report**

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The Task Force recommends that emergency planning and mitigation activities currently underway continue; and proposes additional activities to improve the ability to prepare for, respond to and recover from all hazards in the Delta. These additional activities focus on the development and implementation of an interagency unified command system organizational framework, an emergency preparedness and response strategy and the appropriate exercises and training. While potential funding sources have been identified in the report, the complexity of the Delta region organizational framework that includes many public and private stakeholders may require further legislation to fund the development and implementation of the recommendations contained within this report.



# **CALIFORNIA'S SACRAMENTO-SAN JOAQUIN DELTA: PLANNING AND PREPARING FOR HAZARDS AND DISASTERS**

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**THURSDAY, AUGUST 16, 2012**

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON ECONOMIC DEVELOPMENT, PUBLIC  
BUILDINGS AND EMERGENCY MANAGEMENT,  
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,  
*Washington, DC.*

The subcommittee met, pursuant to call, at 9:36 a.m., in the San Joaquin Council of Governments Building, 555 East Weber Avenue, Stockton, California, Hon. Jeff Denham (Chairman of the subcommittee) presiding.

Present: Representatives Denham and Shuster.

Also Present: Representative McNerney.

Mr. DENHAM. Good morning. The subcommittee will come to order.

I want to first start by welcoming Chairman Shuster of the Subcommittee on Railroads, Pipelines and Hazardous Materials, and former chairman of this subcommittee, here today. One of the things that we are talking about today are the pipelines that run through the Delta, so I am glad you were able to join us.

I ask at this time unanimous consent that Representative Shuster be permitted to sit with the subcommittee at today's hearing to offer testimony and ask questions. Without objection, so ordered.

I also ask unanimous consent that Representative McNerney be permitted to sit with the committee at today's hearing to offer testimony and ask questions. Without objection, so ordered.

This is Mr. McNerney's district, and we appreciate you playing host to us today.

As a representative from California, my constituents and I know very well how important it is to plan and prepare for disasters. From earthquakes to floods to wildfires, good planning and preparedness saves lives and mitigates against damages.

That is why, as chairman of the subcommittee with jurisdiction over FEMA and emergency management, I have held a number of hearings focusing on improving our emergency management capability. This Congress, I authored H.R. 2903, the FEMA Reauthorization Act, which was voted out of the committee in March. That bill would not only reauthorize FEMA and key emergency management programs such as the Urban Search and Rescue System, but would help streamline and reduce costs to disaster assistance pro-

grams, ensuring communities can recover more quickly following a disaster.

Today, we are here in Stockton, California, to specifically examine planning and preparedness in Sacramento and the San Joaquin Delta region. It is important to ensure that all levels of Government are working together to plan for and prepare for any hazards and disasters.

The California Delta has more than 1,000 miles of waterways, more than 1,100 miles of levees, barrier water supply lines, petroleum pipelines, and two inland seaports. The Delta is the main hub for delivering fresh water to millions of California residents in the San Francisco Bay area and southern coastal communities of the State, along with millions of acres of farmland of the San Joaquin Valley.

To plan for a disaster in this region, in 2008 the California Legislature passed legislation that created the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force to make recommendations on improving, planning, and preparedness. The task force, led by CalEMA, issued its report January of this year. The report included recommendations related to establishing an interagency unified command system framework, developing an emergency preparedness and response strategy, and ensuring all hazards training and exercises. Many of these recommendations require close coordination with FEMA, the State and local communities, as well as those in charge of our infrastructure and utilities.

That is why I am pleased to have such a diverse panel of witnesses with us here today. I look forward to hearing from the witnesses on how they are able to plan, prepare for hazards and disasters here in the Delta.

Again, I want to thank our witnesses for being here today.

At this time, I would like to recognize Mr. McNerney for an opening statement.

Mr. MCNERNEY. Thank you, Mr. Chairman.

Today we will discuss a critical issue to the Delta communities, the ability to best prevent and respond to natural disasters, particularly floods. As we know, the Delta is a unique and invaluable resource for the region's farmers, families and small businesses. Furthermore, much of California relies on the Delta sustainability.

The Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force's report on emergency preparedness highlighted the ongoing need to prepare for natural disasters. Achieving this goal requires coordination between local, State and Federal agencies, as well as first responders and the community at large. I want to thank the task force for its work on this important issue.

As the task force's report indicated, there are many components that lead to successful emergency response plans. Today we are focusing on preparation and prevention for the Delta. Maintaining levee safety, sustainability and improvements is at the core of preventing floods. Multiple reports and studies have reinforced not only the cost-benefit of levee improvements, a top priority for nearly every Delta county, but also that this investment enhances the long-term stability of water quality and water delivery for people throughout the State.

Additionally, agriculture is a multibillion-dollar industry that depends on the stability of the Delta. A lack of long-term Delta levee management will result in higher flood insurance costs for the people we represent. Disaster preparedness and mitigation not only protects the livelihood of our region and its residents but also benefits the State's economy.

I recognize that levee improvements are only one portion of the issue we are discussing today. The task force also reports on one obstacle that we all know very well, and that is the funding. All levels of Government are battling deficits and a lack of resources. Whether it is to develop a multiagency coordination system, implement communication plans, or continue existing efforts, counties are struggling to find the necessary resources to execute these policies. We must be united in our goal to ensure that the Delta region is able to quickly respond to and prepare for any natural disasters. At a time when our budgets are already stretched thin, we must prioritize. Preventing a disaster that may devastate our families, homes, and economic livelihood should be at the very top of our list.

We must focus our investment on strengthening our levees and shoring up our safety, not spending money on poorly planned new projects.

There is still much work to be done on this issue, and the task force's report is an important step in the right direction. I look forward to everyone's testimony today, and I am ready to find commonsense ways for all of us to protect the Delta and its residents.

With that, I yield back, Mr. Chairman.

Mr. DENHAM. Mr. Shuster.

Mr. SHUSTER. Thank you, Mr. Chairman, and thank you for having me here today.

Thanks, Mr. McNerney, for hosting us here in your district.

I see my colleague from the Armed Services Committee, Mr. Garamendi, here today.

This is my first trip to Stockton. On the trip—ride over here, I was surprised, actually shocked to see the size of the port you have here in Stockton. When they said there was a port, I expected to see some little boats floating around, but it is a significant port and a significant asset for a community 60 or 70 or 80 miles inland from the coast. That is something that, again, surprised you had it, but as Jerry and I spoke here a little bit, what a great asset.

You look all over this country—I am off track here a little bit, but I am so taken with it that I just want to say this. You have a port inland, and in this country in California, Pennsylvania, the south and southern coast, all those ports right on the coastline are very congested, very difficult to get shipping products in and out of there, to get them on the boat to the truck, to the train. So you really have a great asset, and I would urge you to continue to develop it and keep it open, keep that channel deep enough to bring those big boats in here. It helps the economy of this area, but it helps the economy of the United States.

Again, I want to thank my colleague, Chairman Denham, for holding this important hearing, and also his great work that he has done as the subcommittee chairman. He is leading the fight—I think everybody by now has seen what is going on at the GSA, and

it is Jeff Denham who is the guy leading the charge, trying to push back on that waste and abuse that is occurring at the GSA. So he has done a great job.

If you haven't seen it on the news, you have probably seen Chairman Denham on the news railing about it. But he is doing absolutely the right thing.

But it is important that we have this hearing today because of the nature of hazards that come to California—earthquakes, floods, wildfires. You name it, California has to prepare for it. The Chairman has assured me that none of that is going to occur today while I am here, and I am going to hold you to that.

But as a Californian, he knows the importance to plan and prepare for disasters, and he has held a number of these hearings focusing on improving emergency preparedness. As a former chairman of this subcommittee, and I was a member also of the special panel that we investigated the preparation and response to Hurricane Katrina, so I am very familiar with the critical importance of preparedness, effective emergency management, and the consequences of when they do not work as they should.

Our work at the time resulted in the Post-Katrina Emergency Management Reform Act, which authorized a national preparedness system, and among many things, it authorized FEMA for the first time in the legislation.

One of the things, as I studied the area here, there is a lot of similarities between the Delta and the New Orleans region, the main thing being that you have a lot of areas that are below sea level, which can cause terrible, terrible problems, as we saw in New Orleans.

So I am proud to be working with Mr. Denham, who is the author of H.R. 2903, which is the FEMA Reauthorization Act. It is out of committee. We hope to get it on the Floor in September and pass it out of suspension, because I think it is one of those pieces of legislation that people from the Delta, people from New Orleans, people from all over the country can get behind to make sure that we have a robust authorization in place, especially as we are now in the hurricane season on the east coast.

As Mr. Denham has pointed out here in Stockton today, specifically we are examining planning preparedness for the Sacramento-San Joaquin Delta region. So I look forward to hearing from all of our witnesses—

Mr. MCNERNEY. Will the gentleman from Pennsylvania yield?

Mr. SHUSTER. Yes, sir.

Mr. MCNERNEY. I just wanted to thank you for your comments on the Delta. The Delta is well known to this district as being an economic driver, and it is important that someone from out of State can come here and see what a resource that is for our community, and we can work together to make sure that the Delta continues to receive resources and gets dredged once in a while, creates jobs for our region. So thank you for that comment.

Mr. SHUSTER. Absolutely, and I think it is important that I realize it, coming from Pennsylvania. I know the Central Valley is the bread basket of probably the world. I was in a factory a couple of years ago that produced tomato sauce, and I said where do you get

your tomatoes? And they said, well, everybody gets their tomatoes from the Central Valley.

So this is important not only to California but to the United States and to the world. So again, I appreciate it, and I yield back, Mr. Chairman.

Mr. DENHAM. Again, I would like to welcome our witnesses here today. Our first witness this morning is the Honorable John Garamendi.

I ask unanimous consent that our witness' full statement be included in the record. Without objection, so ordered.

Since your written testimony has been made a part of the record, the subcommittee would request that you limit your oral testimony to 5 minutes.

Mr. Garamendi, you may proceed. Welcome.

**TESTIMONY OF HON. JOHN GARAMENDI, A REPRESENTATIVE  
IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mr. GARAMENDI. Thank you, Chairman Denham.

Mr. Shuster, thank you for coming to California. You are quite correct about the deep water, about the port here. I will also remind you that we have requests for money to deepen the channel. I am sure that since you are on both the House Armed Services and the Transportation Committee, you will take that into consideration and provide the opportunity for even more ships to come not only to Stockton but to Sacramento. And some day, we will take you on a tour of the Delta, perhaps before you leave. You will enjoy it. It is an extraordinary place.

I have had the pleasure since 1974 of representing the Delta in one or another forms, as a member of the California Legislature, later as an insurance commissioner dealing with emergencies here in the Delta, and then at the Department of the Interior, where I had specific responsibility for the water and the Delta here in California. More recently, I do represent the Delta in the 10th Congressional District.

We have seen it over the years. We have seen the emergencies. We have seen the Delta levee breaks beginning back in, for me, 1975–1976, and it is ongoing. The importance of this hearing cannot be underestimated. It is critical that you carry out the recommendations, that the Federal Government carry out its part of the recommendations that have been put forth by the task force. They are good recommendations. They call for coordination. They call for enhanced training and preparation. All of that is critically important.

It also calls for money. We cannot ignore it. We are going to pay earlier, or we are going to pay late. Paying late, you are going to pay a lot more, which brings me to the point that I would like to bring to the attention of this committee, since you are the infrastructure and transportation committee.

It is critically important that we pay attention to the infrastructure needs of the Delta. The levees in the Delta are old. They were basically agricultural levees built over the last century or so. They were never designed to deal with the current pressure that is put on the levees both because of the subsidence of the interior islands, as well as the increased water flows.

So we need to deal with that. Otherwise, the entire Delta could be at risk from a levee break at one of the key islands. The State spent time, and the Federal Government through the Bureau of Reclamation and the Corps of Engineers, have spent a lot of time studying the Delta. They have spent precious little time spending money on repairing the levees of the Delta, except when a levee breaks, and then a lot of money is spent.

You mentioned lessons learned from New Orleans. Well, the lesson, at least one of the lessons from New Orleans is prevent the levee failure. That is, take early action, build the levee properly, and prevent the levee failure. That same lesson needs to be applied here in California.

We also are dealing with a very significant change in the very nature of the Delta. This is a proposal that has been ongoing for some time, or at least a study that has been ongoing for some time called the Bay Delta Conservation Planning Process, what to do with the water system in the Delta, the dual goals of water delivery to those folks south of the Delta pumps at Tracy, and the environment and the economy and agriculture of the Delta itself.

A proposal hit the street a month-and-a-half ago by the Governor and by the Department of the Interior that will have profound effect on the Delta. It is a dual conveyance proposal, one that calls for the creation of two tunnels, 15,000 cubic feet per second capacity, that would take water out of the Sacramento River north of the Delta and deliver it to the pumps.

It is a dual system, one that would also take water from the Delta as it presently occurs. That pumping from the Delta has gone on for some 60 years by the Federal Government, and a little less by the State government, using the Delta levees as a plumbing system to deliver water from the Sacramento to the pumps at Tracy.

That plumbing system has not been maintained. Essentially, it has been a plumbing system that has occurred for more than half a century with precious little maintenance of the levees, which are the essential elements of that plumbing system. We need to address that. It is essential that in going forward, that the Federal Government and the State government address the Delta levee maintenance issue. Otherwise, we are going to spend forever dealing with emergencies.

The cost of repairing the Delta levees is thought to be somewhere between \$2 and \$4 billion. The cost of an emergency is somewhere between \$8 and \$16 billion. That is a catastrophic failure. It would make sense to spend money on prevention rather than in dealing with the emergency, another lesson from New Orleans.

If I might take another minute, Mr. Chairman, with your permission.

So as we move forward here with this hearing, you are dealing essentially with how to deal with an emergency. I want to draw your attention to how to prevent the emergency from happening in the first place.

It is incumbent upon those who use the Delta—that is, the farmers and communities in the Delta—to maintain their levees, and they have. It is also incumbent upon the Federal and the State governments who also use the Delta levees to do its share in maintain-



ing those levees. It is cost effective. It is wise. Its importance on human life and economic life cannot be understated.

So I want you to leave this hearing today with at least an understanding, if not a commitment, to preventing an emergency, to spend the money in prevention that is upgrading the levees to a standard that can withstand both the pressure of a flood, as well as the potential of an earthquake. It is the cheapest possible investment, prevention, upgrading those levees.

It is also essential in any water system that the State might comprehend in the future, whether it is a dual tunnel or a continuing pumping through the Delta, that the levees must be maintained, and it is the responsibility of those who use the Delta levees as a plumbing system to maintain those levees.

With that, Mr. Chairman, thank you for the forbearance and the extra minute.

Mr. DENHAM. Thank you for your testimony this morning.

At this time, we will call up our second panel.

On the panel is Mr. Robert Fenton, Jr., assistant administrator for response, Federal Emergency Management Agency, FEMA; Mr. Brendan Murphy, assistant secretary, California Emergency Management Agency, CalEMA; Ron Baldwin, former director of emergency operations for San Joaquin County; Timothy Alan Simon, commissioner, California Public Utilities Commission; and Mr. Alexander Coate, general manager, East Bay Municipal Utility District.

I ask unanimous consent that our witnesses' full statements be included in the record. Without objection, so ordered.

Since your testimony has been made a part of the record, we would ask you to keep your oral testimony to 5 minutes.

Mr. Fenton, you may proceed.

**TESTIMONIES OF ROBERT J. FENTON, JR., ASSISTANT ADMINISTRATOR FOR RESPONSE, OFFICE OF RESPONSE AND RECOVERY, FEDERAL EMERGENCY MANAGEMENT AGENCY; BRENDAN A. MURPHY, ASSISTANT SECRETARY, CALIFORNIA EMERGENCY MANAGEMENT AGENCY; RONALD E. BALDWIN, FORMER DIRECTOR OF EMERGENCY OPERATIONS, SAN JOAQUIN COUNTY; TIMOTHY ALAN SIMON, COMMISSIONER, CALIFORNIA PUBLIC UTILITIES COMMISSION; ALEXANDER R. COATE, GENERAL MANAGER, EAST BAY MUNICIPAL UTILITY DISTRICT**

Mr. FENTON. Good morning, Mr. Chairman and members of the committee. My name is Robert Fenton. I am the assistant administrator for response. As a fifth generation San Franciscan, I have spent a lot of time in the California Delta region. I came to my current role in 2009 after 13 years of service with FEMA's Region IX in our Oakland office, which serves not only California but the States of Arizona, Nevada, Hawaii, Guam, American Samoa, and other U.S. interests.

During that time, I supported the response to major floods in the California Delta in both 1997 and 1998, and I appreciate the opportunity to return home to discuss FEMA's support of current planning and preparedness efforts in this region.

As you know, the Sacramento-San Joaquin Delta is a region where two of California's largest rivers meet. Over 1,100 miles of levees created 57 leveed island tracts, some of whose surface can be 20 feet or more below the outside water level. Two-thirds of all Californians, about 23 million people, and millions of acres of irrigated farmland rely on the Delta for water. Disruption of this water flow due to a disaster would have a devastating impact on California and would create widely felt impacts across the Nation.

Through our FEMA Region IX Office, FEMA and our partners are deeply engaged in addressing the long-term water-related issues in California through a whole-community approach. This approach to emergency management engages not only the Federal, State, local, tribal and territorial governments, but also the private sector, nongovernmental organizations, and the public to collectively understand and address the community needs. FEMA has joined with partners across this whole community to implement cooperative policies that support adequate, safe, and dependable water supplies for the people, businesses, and institutions of not just California, but also Arizona, Nevada, Hawaii, Guam, and other U.S. interests. This engagement is achieved primarily through water-focused joint planning efforts and exercises with our partners.

Most recently, FEMA and our partners have conducted these planning efforts in support of Presidential Policy Directive 8, which directed the Secretary of Homeland Security to develop a national preparedness system that defines the core capabilities necessary for the Nation to prepare for incidents of greatest risk. This system will include a series of integrated national planning frameworks covering prevention, protection, mitigation, response, and recovery, and will inform planning in support of these frameworks at every level of Government through a national planning system.

As we work to implement PPD-8, our planning assumptions for catastrophic disasters continue to be based on worst-case scenarios. They are designed to challenge preparedness at all levels and force innovative, nontraditional solutions as part of the response and recovery strategy to such events. FEMA and our partners seek to identify the highest priority tasks necessary to save and sustain lives and stabilize a catastrophic incident during the critical first 72 hours, and we work across all segments of the society to identify how we can collectively achieve these outcomes.

FEMA also conducts regional catastrophic planning to address area-specific disaster scenarios which present greater likelihoods of occurrence based on location. Much of this work is coordinated through our Regional Interagency Steering Committees, which are senior-level entities that address issues related to response and recovery in all of FEMA's 10 regions.

In California, the San Francisco Bay Area Earthquake Response Plan, published in 2008, and the Southern California Catastrophic Earthquake Response Plan, published in December 2010, are based on input from thousands of emergency management professionals and describe the joint State and Federal response to catastrophic earthquakes. These plans address the potential damage to water infrastructure systems, including distribution, treatment, and sewage systems.

In addition, the Cascadia Subduction Zone Planning Project represents a whole-community partnership to develop a disaster response plan based on a magnitude 9.0 earthquake along the Cascadia Subduction Zone. This disaster response plan describes activities, including collaborative efforts, to be implemented in the immediate aftermath of an earthquake along the subduction zone.

In conjunction with broad-based planning efforts like our catastrophic and hazard-specific planning, FEMA also continues to support the State of California in preparing for catastrophic disasters in the densely populated Los Angeles and San Francisco metropolitan areas. Essential to these efforts is a shared and coherent analysis of threats to potable water production and distribution in communities at risk for severe ground-shaking.

In addition to our planning efforts, FEMA brings together emergency management professionals across the whole community to improve preparedness by exercising plans. As part of the 2008 California statewide Golden Guardian Exercise, FEMA and the California Emergency Management Agency joined other State, local, tribal, governmental, and nongovernmental stakeholders exercising the San Francisco Bay Area Earthquake Plan. This year's Golden Guardian Exercise includes a test of the Southern California Catastrophic Earthquake Response Plan, including the establishment of a water conveyance task force to assist in the restoration of potable water deliveries following a magnitude 7.8 earthquake.

Finally, to further promote awareness and preparedness, FEMA and CalEMA have established a Memorandum of Understanding related to disaster assistance in the Delta area. The MOU establishes eligibility for FEMA's Public Assistance program in the special reclamation districts for the Delta area. The MOU also identifies responsibilities of FEMA, CalEMA, and the reclamation districts during and after an event.

FEMA's preparedness efforts in the Sacramento-San Joaquin Delta area are exemplified by the water-focused joint planning and exercises that occur there regularly. By engaging the whole community in catastrophic, all-hazards, and hazard-specific planning, and in the exercises that test and evaluate these plans, we continue to address the long-term water-related issues in California. Thank you.

Mr. DENHAM. Thank you.

Mr. Murphy.

Mr. MURPHY. Thank you, Mr. Chairman, Congressman Shuster and Congressman McNerney. Thank you for allowing me the opportunity to once again testify before this committee and provide testimony today regarding the Sacramento-San Joaquin Delta.

The California Emergency Management Agency is responsible for coordinating the State's overall preparedness efforts and enhancing our capabilities for both intentional and natural disasters. CalEMA coordinates homeland security and emergency response under the mission of saving lives and reducing property loss during times of disaster and works to expedite recovery from the effects of disasters.

In coordination with the National Preparedness Goal, California's overall preparedness system is comprised of five mission areas: prevention, protection, mitigation, response, and recovery. One of the

significant lessons we have learned is that we must focus our investments on disaster preparedness efforts so that we can mitigate the devastation of human suffering and financial loss for future generations. We have learned that we must invest financial resources on the front end to ensure that our infrastructure is secure, that early warning systems are in place, and that the public is well-informed about potential risks and have the tools they need to prepare themselves and their families for when disaster strikes.

As you are all aware, California is faced with a daunting list of disaster risks. Much like the likelihood of a catastrophic earthquake, the daunting threat and risk of a catastrophic flood incident within the California Delta is not just real, but it will happen. As our scientists warn, it is not a matter of if it will occur, it's just a matter of when.

The Sacramento-San Joaquin Delta Emergency Preparedness Act of 2008 required CalEMA to establish the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force. The Task Force was comprised of CalEMA, the Delta Protection Commission, the California Department of Water Resources, and the five counties within the Delta region: Contra Costa, Sacramento, San Joaquin, Solano, and Yolo.

The mission of the task force was to develop recommendations to improve the quality and effectiveness of an all-hazard emergency response in the Delta region, while maintaining a level of readiness consistent with identified threats and our current capabilities. As a result of the recommendations and efforts of this task force, we have worked with our partner agencies to make significant strides towards these efforts.

We adopted and implemented a Delta Multiagency Coordination System which was successfully exercised during the 2011 Golden Guardian Full-Scale Exercise to test the State's ability to allocate scarce resources throughout the Delta region during a catastrophic flood scenario. The exercise focused on preparing for, responding to, and recovering from a catastrophic flood in the northern region and included more than 5,000 local, regional, State and Federal responders, as well as State agencies and nonprofit emergency response and private industry partners who participated in various events throughout the 3-day exercise.

The Delta MACS document is in the process of being integrated into statewide procedures to ensure maximum efficiency and standardization for emergency response with our key partners, including local stakeholders, the California National Guard, and the California Department of Water Resources.

CalEMA held a regional mass evacuation tabletop exercise on January 11, 2012, to provide participants an opportunity to evaluate their current response concepts, plans, policies, procedures, and capabilities for notification, evacuation, and mass care and sheltering in response to a flood-based scenario. This exercise was a regional collaboration between CalEMA and its local and State partners and will serve towards the development of a regional mass evacuation plan in relation to the Delta flood scenario.

The California Delta region also has an Interoperable Communications Plan that was updated in February of 2011, and these documents for interoperable communications resources are avail-

able within the designated area. The plan also includes specifics such as who controls each resource, along with the rules of use and/or operational procedures for the activation and deactivation of those resources.

For flood and evacuation contingency mapping, CalEMA, in direct partnership with the California Department of Water Resources and other State and local stakeholders, participated in a project led by the U.S. Army Corps of Engineers which identified resources and facilities in the Delta, or those that could be easily deployed to the Delta, for any emergency response operation during a flood event. As part of this effort, existing shelter and evacuation plans were reviewed to recognize resources and opportunities available for response and identify weaknesses and needs. A series of flood contingency maps were prepared to highlight the identified resources and outline general emergency response procedures.

We all know the work we do is faced with uncertainties and we must continue to work together to ensure our resources are put to the best use possible. California continues to be recognized as a national leader in homeland security and emergency preparedness, and with your support we will continue to work tirelessly to advance the efforts which we believe will provide the greatest benefit to our State and Nation.

Mr. DENHAM. Thank you, Mr. Murphy.

Mr. Baldwin.

Mr. BALDWIN. I'll get this turned on. Is it on now?

Mr. DENHAM. There we go.

Mr. BALDWIN. I'm Ron Baldwin, former director of emergency operations for San Joaquin County for nearly 30 years. I sat on the task force and participated in all the discussions leading to the issuance of the report. I'll just make two brief comments to supplement my written testimony.

I believe that if the committee wants to delve into the specific recommendations of the report, I again encourage you to distinguish between the two key separate components of emergency flood response. There are those activities that most people equate with the words "emergency response": evacuation, rescue, shelter, and there is the "flood fight." The flood fight is those actions to prevent levee failure during a flood, and if a levee fails it is those engineering actions to limit the extent, the depth, and/or the duration of the flood.

It is important to make that distinction for two reasons. The practical reason is that there are different players and different issues in each. The second is because if I learned anything in 30 years and seven floods, it is that if we want to improve flood response, our prime focus has to be on the flood fight. If we are as efficient and effective as possible in preventing levee failure once the flood comes, and if we are as efficient and effective in limiting the physical extent, depth and duration of the flood if a levee breaks, then we prevent or physically limit the tragedy and the damage. If we do the other functions well, that is important, but we only ameliorate the tragedy.

I would include in the idea—I mentioned three specific recommendations of the report that bear on that: Delta MACS, or the idea of regional planning; flood contingency mapping or defense in-

depth; and the flood fight emergency funding mechanism. I would also include the idea of secondary defenses behind some of our critical infrastructure that is protected by levees in this country.

I will make a rather bold statement. In my experience—I can do that; I am retired. In my experience in this country, we are not as well prepared for the flood fight as we could be.

The second point I will make is we now have a strategy. This is very unique, and I think the legislature recognized the importance of the Delta. It isn't done for everything everywhere. I mean, we have a strategy that was developed for improving response in the Delta, and I am assuming that all agencies and levels of Government accept that strategy and want to move forward. I just mentioned two good public administration steps that need to be taken now.

The first question is funding. I was brought up, how do we fund the implementation of the strategy? Normally that is a killer, right? In this case, there are actually quite a bit of funds that are flowing down from quite a bit of different sources that are going into flood or could go into flood preparedness.

So the question is how is the funding going to tie in with the strategy, and at some point we would want to see how that is going to happen. I mean, if the Corps has money, what are you going to do about the strategy? So we don't end up 2 or 3 years down the road with duplication of effort or, oops, we forgot to implement something in the strategy, or whatever. So we need to work out the implementation fiscally, and it is an historic moment. We have the funds to do it and we have the strategy to move ahead.

The second issue really is also good public administration. It is a combination of standards. How do we know we got there? The task force did its job. We have a strategy. It is very general. It is very vague. You could interpret it 50 million different ways while saying, well, we got there.

There needs to be a process of multiple agency review as we move through the strategy with the State and Federal Governments, and local governments move through the strategy, to say, yes, we finished this, and it meets the standards that we want, so we have something we can report back in 3 or 4 years and say, yes, we set some standards for what it means to have a flood contingency map, we met some standards for what it means to have a MACS, and through a multiagency process we confirmed that that actually happened and meets the standards that are either out there or that we developed.

So I think those are important as we move, and this is a critical point to establish that, and I will actually finish about a minute early on my statement.

Mr. DENHAM. You set an example for everybody else.

[Laughter.]

Mr. DENHAM. Thank you, Mr. Baldwin.

Mr. Simon.

Mr. SIMON. Thank you. Is my mic on? OK.

Good morning, Chairman Denham and distinguished members of the subcommittee. Thank you for this opportunity to speak.

The California Public Utilities Commission, or CPUC, is responsible for the safety and security of critical utility infrastructure for

water, natural gas, electricity, communications, and rail within the Delta and throughout the State.

The CPUC's authority over investor-owned utility infrastructure in the Delta includes pipelines carrying natural gas for residential, commercial, and industrial use, as well as electric generation. As chair of the Committee on Gas for the National Association of Regulatory Utility Commissioners and a member of the Pipeline Safety Task Force for the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration, I have a particular concern with pipeline safety.

The Delta levees protect natural gas production and pipeline facilities throughout the Delta. Many gas and oil production wells are located here, and the region's electric utility, Pacific Gas and Electric, or PG&E, has transmission and distribution pipelines running throughout the Delta to transport gas from northern California and from out of State. PG&E also has pipelines that interconnect its own system, diverting gas to and from underground storage facilities located on islands in the Delta such as the McDonald Island gas storage field.

Although some facilities are designed to withstand various levels of irrigation and flooding for local agricultural needs, the gas production and transportation infrastructure could be damaged if it is not designed for floodwater levels from levee breaks. Generally, high-pressure pipelines are not affected by the presence of some water near the line, but unanticipated flooding that would otherwise be averted by the levees could cause soil erosion under the pipelines. Excess water around pipelines could also increase the buoyancy of some of these pipelines. These conditions, along with significant increases in water levels above the pipeline, could create stresses which may not have been factored into the pipeline's original designs.

In response to the horrific pipeline rupture and explosion in San Bruno, California, in fall 2010, the CPUC opened a rulemaking proceeding to establish a new model of natural gas pipeline safety regulation, including expanding our emergency and disaster planning coordination with local officials. The CPUC also increased the scope of PG&E's gas transmission and storage rate case to include a safety phase on PG&E's disaster and emergency plans, shut-off valve testing and monitoring, changes to capital project priorities, safety procedures, and relationships with first responders. I was the assigned commissioner for that proceeding.

The gas storage proceeding was the first to establish protocols requiring utilities to coordinate with first responders during emergencies. In addition to addressing pipeline safety, the CPUC has moved to ensure the safety factors of electrical and telephone poles so that they are strong enough to withstand high winds, flooding, and other disasters.

In the Joint Pole Safety rulemaking, the commission has adopted pole loading rules and will address pole structural strength in the next phase, that being Phase III, of this rulemaking.

The CPUC also has an essential role in ensuring the reliability of emergency communications during disasters. Inspired in large part by Hurricane Katrina and the WARN Act, in 2006 the California Legislature adopted AB 2393, which required the CPUC to

address communication systems' backup power needs. Unlike copper telephone wires, fiber optic cable, coaxial cable, and other facilities do not provide warm-line power to customer telephones. In the Backup Power proceeding, the CPUC adopted customer education guidelines on the backup power needs and limitations of facilities-based residential telephone services, as well as service provider responsibilities in power outages.

CPUC jurisdiction has been an issue in the Joint Pole Safety proceeding and others. One of the pillars of the CPUC's fundamental regulatory responsibility is to enforce core safety guidelines. This commission needs the ability to protect and insure the functioning of communication infrastructure during emergencies. This role is clearly within the authority of the CPUC and rooted in the historic police powers of the State. Some may believe that the transition from the traditional telephone system to Internet Protocol communications systems may jeopardize the authority of State utility commissions in this area. I urge Congress to take a close look at this issue.

States retain jurisdiction over the health, safety, and welfare of their citizens, and it is the position of my office that the CPUC has now and will continue to have jurisdiction over the communications infrastructure for public safety purposes.

With that said, I thank you for this time.

Mr. DENHAM. Thank you, Mr. Simon.

Mr. Coate.

Mr. COATE. Mr. Chairman and members of the subcommittee, I appreciate very much the opportunity to provide testimony this morning on the importance of emergency preparedness and response. My name is Alexander Coate. I am the general manager for the East Bay Municipal Utility District, and I appreciate very much the opportunity to provide testimony on the vital role that Government plays in emergency preparedness and response in the Delta.

This morning I would like to focus on the real impacts of levee failure and the actions we recommend be considered by this committee.

Through direct experience we have learned some important lessons on emergency preparedness that we believe can help inform future discussions. Levees that protect the lifeline of our water system, the Mokelumne aqueducts, have failed three times since 1980. The most recent failure occurred on June 3rd, 2004. It was a clear day, and with no warning, the Upper Jones Tract levee along Middle River failed. There was no precipitating event such as an earthquake or a storm. The levee simply gave way to the water that it held back.

Ultimately, both the Upper and Lower Jones Tract islands were inundated with flood waters, partially submerging our aqueducts. I have a photograph over here that shows you what that looked like after the flood had occurred.

This was a true emergency for East Bay MUD. Over 90 percent of the drinking water we supply to 1.3 million people is transported through these aqueducts. They are also connected to the San Francisco, Contra Costa and Dublin San Ramon Services District water systems.



A failure of the aqueducts would interrupt the East Bay's water supply and leave the region with, at most, 6 months' worth of water under severe rationing conditions.

First responders like East Bay MUD quickly depleted their available resources, and we were forced to stand by until additional resources were made available.

Response times were delayed because field staff were not empowered to act and had to wait for authorization. Aqueducts were threatened by massive debris, and authorizations were received only in the nick of time to prevent that debris from hitting the aqueducts and rupturing them.

You can see after draining, there is a bus there. That bus almost hit the aqueducts.

Once the flood waters were pumped out, the aqueducts were found to be intact, but re-coating was necessary at a cost of \$10 million.

The key lesson that we learned from the failure of the Jones Tract levee is the importance of having a well-coordinated emergency action plan that includes a commitment by State and Federal agencies to provide resources and funding to repair the levees. Because the consequences of delaying action after a levee break can be catastrophic, the extent of the Federal and State commitment should be known and communicated in advance so that local agency staff are empowered to respond.

I highlight this event because it provides a case history of the real consequences that can result from indecision and inadequate policy and collaboration among all levels of Government.

The 51 miles of levees that protect East Bay MUD's aqueducts in the Delta also protect other critical infrastructure, some that we have discussed here today. That includes the State and Federal export pumps, the Contra Costa Water District intakes, State Highway 4, Kinder Morgan Petroleum Pipeline, PG&E pipelines, and the Burlington Northern Santa Fe rail lines. An immediate response to future levee failures will be critical to minimize costs and prevent significant interruptions of major services.

We know from experience that the threat of future failures in the Delta is real, and EBMUD has taken multiple actions to protect its facilities, including significant investments in levee improvements, seismic retrofit of our aqueducts, constructing interconnections between our three aqueducts to improve resiliency, providing interties with other water systems in our service area, implementing aggressive water conservation and recycling to reduce our dependence on supplies rolling through the Delta.

Despite the tremendous amount of work that we and others have done to prepare for emergencies, much more could be done if additional resources were available.

First, we believe a coordinated State and Federal response plan is vital to ensure a rapid emergency response.

Second, we hope that when your committee renews the Water Resource Development Act, you will give consideration to the approaches that we implemented. We recommend that a Federal program to assist such efforts be authorized. We urge you to view emergency preparedness in the broadest sense, not only to include levee repair and material stockpiling, but also efforts to diversify

and increase the reliability of water supplies, and to bolster infrastructure.

WRDA funding has been very important to us in developing alternative water supplies through recycling, and we view WRDA as a key vehicle to develop effective Federal policy to support local emergency preparedness efforts.

Finally, we recommend that you consider funding of levee improvements to meet the U.S. Army Corps of Engineers' Public Law 84-99 Standard, and in so doing reduce the risk of failures, and also funding for stockpiling of emergency response materials.

And with that, Chairman and members of the committee, I very much appreciate this opportunity to provide testimony.

Mr. DENHAM. Thank you.

I thank all of our witnesses for your opening statements.

We are going to have several rounds of questioning this morning. This is one of those topics that we could have a whole series of hearings on, everything from the threats to the task force process, the planning and preparedness, what the actual role of FEMA is, the mass evacuation if there was a catastrophic disaster, and then the flood and evacuation contingency planning.

Here in the Delta, we have some old pipelines, oil and gas, that could devastate our water supply. We certainly have a water supply that not only supports our agriculture industry but supports the water supply for the larger metropolitan areas as well.

But the biggest issue here is you have a couple of very large communities that are below sea level, and a break in the levees could see something worse than what we saw with Katrina.

And so as chair of this committee, I want to make sure that not only are we prepared and doing some of the important repair work that needs to be done, but as we develop a new FEMA plan, that we are actually taking into consideration the flood-type situations that we saw in Katrina and learn from past experiences in making sure that we are not seeing the same challenges right here in our home State.

So I will start off this morning. Mr. Baldwin, you mentioned the importance of immediate funding for flood fighting. Do you think the agreement with FEMA will allow a rapid response if such a catastrophe does arise?

Mr. BALDWIN. I think there needs to be a very—the problem is that nobody budgets for these floods. As far as the flood fight, we have some very expensive responses. I mean, it is not a matter of getting a few more fire engines or something. You might have to cut a contract with an engineering firm for \$1 million to buttress the levee or something.

What we end up doing is we get out there and the reclamation district, which is naturally the one that should respond, doesn't have the cash flow. So the agencies that do have the funds or potentially could get the funds are farther up the chain, State or Federal, and so it takes more time for them to get going. Sometimes we end up out there, and Jones Tract was great. I was the one sitting out there within an hour of that break, and we are sort of arguing over who can fund it, who can act. We know what we need to do, but who can actually take the action?

There are some issues with FEMA, jurisdictional issues about reimbursement. I could go into a lot.

So what we need to do is FEMA comes in after the disaster and helps reimburse costs, and that is great, under the Stafford Act. But what we need is we need to get cash flow going at the time of the emergency for the flood fight so that the agency's best placed act, when we know, we all jointly agree, here is a problem and we need to deal with it, can actually get it going.

So we have recommended, and the task force recommended, we said we have to have that mechanism. It is not an agreement. It is not money coming later. When that flood starts, we have to have funds. Now, there has been talk about an emergency response fund for the flood operation center at DWR. There is talk about using the California Disaster Assistance Act to push money out. It could be an independent fund, and all that could be worked out.

But the issue is it is not money coming after in 48 hours. It has got to be funds that can break that deadlock and we can actually respond to the problem and get it done by the agency best placed to do it. It could be the Corps. It could be DWR. It could be the reclamation district.

Mr. DENHAM. If there was a catastrophe today, would you anticipate delays in funding?

Mr. BALDWIN. I would anticipate that I have not seen a clear-cut, unambiguous solution that would guarantee in my mind that we could not run into that problem again. Sometimes it works, sometimes it doesn't, but I think it is—I mentioned in my testimony, I think it is absolutely critical. We have got to have—we can't have 24-hour delays waiting to respond to a levee problem for bureaucratic reasons. We have got to have the cash flow, and it has got to go to the agency.

It is in the task force recommendation. I haven't seen the solution that tells me that when the flood comes tomorrow, we will respond as promptly as possible, we will get the levee fixed, which will save FEMA and everyone else millions of dollars, and we will respond to that.

Can I add one last point? FEMA has a little regulation in their reimbursement which makes sense, but it doesn't make sense. They only reimburse you the costs for expenses incurred within your jurisdiction. So if the county goes on a levee, the levee is in the jurisdiction of the reclamation district. We are endangering our ability to reclaim any reimbursement from FEMA due to that regulation. San Joaquin County has had a legislative platform for years saying we ought to adjust that. If an agency goes on another jurisdiction and saves a levee and there is \$100 million in private assistance payouts, then they shouldn't have any question in their mind that they are going to get whatever legitimate reimbursement they should get, because otherwise you create a disincentive for action, and that is what we need.

Jones Tract—I'm sorry. Last thought. Jones Tract, we know what has to be done. So we go through this 24-hour thing, and the Corps says, OK, we are going to do this much. We will put the levee up, but we know we have to rock it, and we are not going to do that. So then we have another argument. OK, who is going to put the rock on it? We need to put rock on, or this thing will wash away.

The next thing you know, CalTrans raises their hand and says we will do it, \$2 million or something like that. Subsequently, they had a heck of a time getting assistance because of that regulation.

I think, again, it is a regulation that makes sense on the face of it, but it probably should be looked at to see if we can't speed up those kinds of decisive actions and then make sure that the funds are there so that we respond and get it done.

Mr. DENHAM. Thank you, Mr. Baldwin.

Mr. Murphy, thanks again for testifying in front of this committee once again. Is CalEMA, is it ready for a flood or an earthquake in this area?

Mr. MURPHY. I think the easy answer is—it is great for me to sit up here and say absolutely, we are absolutely ready. But the reality is we have done a lot of planning, and there is still more work to be done in working out the intricacies of response, especially the point that Mr. Baldwin just made, which is when you are looking at a natural levee failure in this State, you have a multilayered response. Most of those levees are owned by reclamation districts that are located inside of counties and/or cities.

So your buildup is across many layers of Government up to the top. We do have some regulations and some other things that probably could be better worked out in the scenarios that we have seen in the past.

The easy answer is yes. As far as response goes, we have always been able to respond. But the first and foremost part is saving lives. The second piece is saving property. And I think, to the point of Mr. Baldwin, we could be better at saving property if we tweaked a few criteria and moved ourselves ahead, and I think inside the State of California we have been working at that, and that is what you see in the task force recommendations. Those are some of the thought processes that we have had to move ourselves forward and to be an action-oriented response that does save property.

Saving lives is clearly the first priority. But that second, especially when you are talking levees and how quickly you lose property, that has got to be and is a much higher priority in our moving forward, in our planning going forward.

Mr. DENHAM. Thank you.

Mr. Fenton, same question. Is FEMA ready for a catastrophic response in this area—earthquake, flooding?

Mr. FENTON. Sure.

Mr. DENHAM. Destroying the pipelines that go through the Delta?

Mr. FENTON. Well, I think we are as ready as we can be. It is a complex issue as far as the Delta and exactly what we need. What we have done is built plans that I have spoken about. In fact, today we are down in southern California exercising some of those plans, and we have joined with Federal, State, local government and the private sector to look at capabilities across the area.

I think as we start to understand the risks to the communities better—understand what the impacts may be—we have been focused on looking at where the capability is required to respond to an event like this, where those capabilities exist at the local, State

and Federal level. It is a dynamic effort, meaning the capabilities change at every level of Government every year based on budget.

So we continue to do that to ensure that we will have the capabilities there. We continue to look at improving our policies to increase the speed of our assistance to communities, and also to make sure that communities understand the risks within their environments. So we continue to work in those areas.

But I think the authorities that we gained after Katrina significantly helped FEMA to build the capability and capacity to help the State of California. In saying that, I think there is always more we can do. But the authorities we have now, and the resources we have, we feel pretty comfortable in being able to respond to this event.

Mr. DENHAM. Thank you.

Mr. McNerney.

Mr. MCNERNEY. Thank you, Mr. Chairman.

Mr. Garamendi, in his testimony, referred to the Governor's conveyance plan for the BDCP. One significant concern is that the preferred plan, if implemented, levee maintenance will lapse, placing our community at significant risk. On the other hand, investing in levee repair would be an excellent solution to the BDCP dual requirements.

So with that as a background, I am going to address the next question to Mr. Murphy, Mr. Baldwin, and Mr. Simon. How might the Governor's preferred conveyance affect preparation and response to a flood and/or earthquake?

Mr. MURPHY. Congressman, I will be the guinea pig for the response here.

Mr. MCNERNEY. Sure.

Mr. MURPHY. In all honesty, I think until the plan has a bit more of a process to it as far as outside of just a conveyance water aspect, which is really involved with the California Department of Water Resources, I am not in a position to answer until we get further down the road with this initial agreement plan that was talked about a few weeks ago. So I apologize. In the future, I would be happy to address that question as we move forward with the broader plan.

Mr. MCNERNEY. Well, the concern is that a significant amount of resources are going to be going into the tunnel system, and there won't be any more resources left to improve and maintain the levees. So that is basically one of the aspects that I am interested in, but you don't seem to be in a position to answer that, so let's move on to Mr. Baldwin.

Mr. BALDWIN. That is a tough one for me, too. I mean, if you build the tunnel, then you obviously have the issues that have been looked at closely of the security and of the integrity of maintaining that tunnel to deal with that issue, that transport of the water. To me, the Delta is a lot of things besides the water. That is one issue. It is also the people out there, and it is also the infrastructure that we just talked about, the East Bay MUD aqueduct and everything else.

So it doesn't change it much except that, again, if you are going to cut off the resources to protect the Delta, then you are going to get what you pay for. We need to have a levee—I don't get into 100

year, 200 year, 1,000 year. I say, as an emergency manager, give us a fighting chance. Give us levees that basically will hold it, and we will flood fight it. We will keep any damage to a point that is acceptable. I mean, we are not going to save all the bridges in L.A. if we have an earthquake, either.

So if you are going to do that, it brings up the issue of protecting that infrastructure. At the same time, it doesn't change anything except that you have taken one equation out and put it into a different context. Now we have to protect this tunnel. We still have to protect the Delta for a lot of reasons, and we need the resources to give us that fighting chance.

Mr. MCNERNEY. Thank you.

Mr. Simon, you look at this from a little bit different perspective, so I am interested in what you might have to say.

Mr. SIMON. Thank you, Congressman. Our water utilities are somewhat dependent upon the transport of water from northern California, particularly our southern California investor-owned water utilities, and how that allocation occurs is somewhat dependent upon our infrastructure.

I will say prior to coming to the commission, I was appointments secretary in Governor Schwarzenegger's administration, and I know this issue of levee repair and reinforcement is not something new to this administration, and I would simply say that it is necessary for our infrastructure safety to have safe levees. The investor-owned utilities that we regulate are somewhat reliant upon that levee strength in order to maintain the adequate infrastructure in the region.

So I would hope that to whatever extent the tunneling that is being proposed by the administration occurs at that factor of the levees and the importance that the levees play on a multitude of infrastructure that is webbed throughout the Delta region is taken into consideration, and I would expect that it is.

Mr. MCNERNEY. Thank you, Mr. Simon.

Mr. Baldwin, how effective is investing in levee maintenance and improvements in mitigating potential flood risks?

Mr. BALDWIN. That is what I am saying. It is the ongoing debate, what is adequate. I mean, this is what this country has argued for 50 years, what is adequate protection as far as that primary levee for our community. There is always an element of risk. I mean, a 100-year levee, do you maintain that? Obviously, whatever standard you set—FEMA set the 100-year standard 40 years ago. If you want to set 200-year or 500-year, then we have to maintain it. I mean, that is only sensible.

Once you make that decision, then you get into the flood fight to take care of that procedural risk, and you get into what I consider defense indepth. We don't suddenly think that just because we have whatever standard of levee, that we are done. We need to then be able to limit that flood. The levee still might breach. We want to make sure it doesn't. And you need to have more of a defense indepth so that we can use elevated freeways, we can use other techniques to try to limit the damage afterwards.

So we come in. The country establishes the standard for the depth protection, although I don't think in any case, even in earthquakes in L.A., that there is a 100-percent guarantee that any

standard is perfect. So we have to be prepared with those additional lines of defense.

Mr. MCNERNEY. Mr. Baldwin, again, how would you feel the completion of the Lower San Joaquin feasibility study would help with our preparedness?

Mr. BALDWIN. I think it is very important because, although in some sections of that river, the lower part is in pretty good shape, other parts we haven't got a fighting chance. So from an emergency management point of view, I consider it the policymaker's duty to set the standard and get the levees in place and give us a fighting chance to protect the people that are behind them, and the infrastructure and the property. Then give us a good flood fight response, and we will take care of the rest, and I think we will not have perfection.

Like I said, we will not lose any bridges when L.A. has an earthquake, but we will limit it to a level of damage that I think is sustainable over a long period of time. That is what we look for in our disaster response and our protective equipment, is it sustainable over a long period of time, not perfection.

Mr. MCNERNEY. I guess I have another minute or so. I will use it. Thank you.

Mr. Simon, I was kind of intrigued on one of your points, that I think, as I understood it, you felt, or the commission feels that it is the commission's jurisdiction to have jurisdiction over the communications for natural disaster in the levees. Did I understand you correctly?

Mr. SIMON. Specifically backup power. As we are moving into a more IP-enabled communication infrastructure, and this gets into the issue of information versus voice, there are concerns as to whether or not there is jurisdiction over equipment that attaches to regulated assets. It is my position that it is, quite frankly.

But I think a larger issue—the backup power decision, AB 2393, gave clear education guidelines to educate consumers on what are the limitations of having technology that is not connected to copper that provides warm-line services.

Going further, in listening to my distinguished panelists here, I do believe that we need to address safety, evacuation, saving lives, in an IP-enabled communication system. The technologies are changing rapidly, and I have concerns as to how in touch are we, particularly the various telecommunications or Internet service providers, how in touch are we with how consumers receive their information, how effective are we in the interoperability between the agencies that are here, as well as first responders.

This is changing rapidly, and because of the need to have a robust market and to minimize regulation of broadband and the Internet because of the importance that it brings to the economy, health care, so many other areas, I do have concerns about whether we have sufficient oversight to ensure that we can evacuate and save lives in the case of disasters.

Mr. MCNERNEY. Mr. Murphy, would you like to comment on the jurisdiction of interoperability in the case of natural disaster? You have 1 minute.

Mr. MURPHY. The most important part, I believe, of interoperability, and I think Mr. Baldwin would agree, is the actual ability

to communicate, period. What Mr. Simon was referring to was enacted a few years ago, which was really telling the public, hey, these are some of the limitations of your BlackBerry and your iPhone, and a lot of it has to do with backup power after a disaster in relation to those cell sites that we use, limited resources, limited time, limited ability.

When it comes to interoperable communications, it is the role of the primary responding jurisdiction to be able to communicate with other jurisdictions around them where they may need to draw resources from. Particularly in California, we use a system of systems approach, interoperable communications. But number-one priority is communicate with those you are going to need to help you respond.

Mr. MCNERNEY. Thank you, Mr. Murphy.

Mr. DENHAM. Mr. Shuster?

Mr. SHUSTER. Thank you, Mr. Chairman, and I thank all of our witnesses for being here today. I appreciate you taking your time to do this today. It is really important for us to be able to, myself, learn what we can do in Washington to make your jobs easier out here when you are fighting these floods and these fires and earthquakes, whatever the problem is.

Mr. Baldwin, I especially appreciate you being here, coming out of retirement to be back with us. But you bring really two things that I really appreciate. One is a real grassroots, up close and personal dealing with a catastrophe and dealing with the Federal Government and what we do, in many cases, to make your life more difficult. The second thing is, you being in retirement, it gives you the freedom to be able to call it like you see it. I know that people, when they retire from public service, they get out there and they are able to say things that otherwise they sometimes wouldn't. So I appreciate that.

You brought up two points that I would like to ask Mr. Fenton about, but first the plans. I know that you locally here in the Delta have worked with the State to—you have a task force, but you don't have the plan in place. Mr. Fenton, how important is that plan? Because we are talking about having a plan in place so that money flows out to these States and these local governments to be able to respond.

So can you talk a little bit about the importance of the plan and what we can do to help?

Mr. FENTON. Sure. I think that plans are important to have in place, and I think California—just from being here for a long time and working with them through floods—they have great systems in place. Their State Emergency Management System, their ability to share resources and those kinds of things, are in place and shared and utilized throughout the area. You see that during wildfires, and they are probably better than just about any other State in moving resources around the State. They have a great communication system.

So then what we start to look at is do we have specific plans that address specific threats, and I think that is one of the areas where it is reassuring to hear there is more work being done so that we know exactly how we are specifically going to evacuate a community, what roads will be operable, what roads will not, and what



specific resources or assets we need to affect that. And what that allows us to do is look at where those capabilities are prior to an event so we know how to use them during an event.

Planning is much bigger than just the response part or the systems part. It goes across recovery, prevention, protection, and mitigation. It includes looking at plans as far as what we can mitigate prior to an event, and I know the State of California does a good job of this. We have heard discussion here today about infrastructure and those things, to include exercising, to build capacity.

So we need to continue to make efforts in those areas to be able to respond. Going back to Congressman Denham's first question, are we prepared to respond to an earthquake, it takes the whole community to be able to respond. It is like a sports team. One person could be doing good, but if the other players on the team aren't working together and it is not coming together, we are not going to be effective.

Our plans help synchronize and integrate our collective resources and are critical to the success of our ability to respond to an event like this.

Mr. SHUSTER. Don't we have the authority at FEMA to approve the prepositioning of assets they need? Because in a flood, a flood typically, we know a flood is potentially coming. So you can tell the State or a locale to get your assets in place.

Mr. FENTON. You are correct, sir. The authority that you provided to us through the Post-Katrina Emergency Management Reform Act and the Homeland Security Act gives us a lot of that authority prior to events to go ahead and preposition resources. We do have resources prepositioned in California. We have a warehouse in the barrio, and we have the ability to task other Federal agencies to start prepositioning resources in anticipation of an event.

In California, I think their system does much the same as far as moving resources prior to an event to be prepared. In terms of prepositioning, the flood or the hurricane in the southeast is a lot easier than the earthquake. In California, I always say it is earthquake season. But for no-notice events, it is a little bit more difficult to preposition. The key then is to have plans in place and understand where resources and capabilities are ahead of time, because a no-notice event is more difficult to respond to.

Last week, Administrator Fugate did a Thunderbolt exercise, which is a no-notice exercise for FEMA, that included FEMA Region IX and simulated an earthquake here to make sure we are ready. Doing those types of exercises with no notice really tests your agency's ability. Are you really ready for an earthquake? I know you don't want it to happen today, but if it happens right now, do we know what everyone is doing, and do we know where everyone is moving?

Mr. SHUSTER. Mr. Chairman, if I could have 30 more seconds to ask one followup question of Mr. Fenton?

Can FEMA use mitigation funds or preparedness funds for folks in the Delta region here to stockpile to fight floods? Is that something you can utilize?

Mr. FENTON. There are different parts of the mitigation program. There is the mitigation program that comes immediately following

disasters, and usually the State sets priorities on how to use those projects and how that funding can be used.

There is also funding available for mitigation that we use for helping to develop evacuation routes and those kinds of things.

So I would have to look into it to specifically to answer your question about whether we can stockpile resources ahead of time and pay with those mitigation funds. I can do that and submit it for the record, if you would like.

Mr. SHUSTER. I would appreciate that. Thank you.

We are going to have another round?

Mr. DENHAM. Yes.

Mr. SHUSTER. OK. Great.

Mr. DENHAM. Thank you.

Mr. Simon, I understand, as directed by the PUC, California's natural gas transmission operators, they developed and filed a comprehensive pipeline safety improvement plan last year. Do the plans submitted by the gas operators establish an effective and reliable emergency response plan, especially as it pertains to the Delta and some of these older pipelines with oil and gas?

Mr. SIMON. Yes, Chairman Denham. That has actually been required by a series of State and I believe actual Federal legislation as well, that there is adequate emergency response, including shut-off valves, exercises with first responders to ensure the ability to have state-of-the-art response.

Specific to the Delta, that would be regional decisions. It would be something I would strongly recommend to the utilities, and I will look at both the rulemaking and the pipeline enhancement plans on a forward-looking basis to ensure that safety plans are specific to each geographical region. I have not been briefed specifically by our Consumer Protection and Safety Division, but I would be willing to wager that they understand the safety risk that exists in the Delta region, particularly in view of the levees and soil erosion and other things I presented.

But I will make it a point, and I can also report back to the committee for the record to ensure that the pipeline safety enhancement plans, including testing, are specifically designed to deal with Delta issues, as well as the urban and rural areas.

[The information follows:]

The utility serving the Delta, PG&E, reports that it has in development a flood-contingency plan for the McDonald Island gas storage facility located in the Delta, which will include a detailed plan for potential levee failure. This plan will address specific measures that will be taken for employee and equipment safety, and that will provide additional operational details for facility operators. This document is in draft form and is not available for review at this time.

PG&E's Company Emergency Plan does not specifically address levee breaks, but speaks to the functional activities PG&E will undertake in any natural or manmade disaster throughout the service territory, including levee breaks or other issues affecting the Sacramento Delta. This plan, and the related emergency response plans (gas, electric,

etc.) would be operational in the event of a levee break or other emergency in the Sacramento Delta.

PG&E reports that gas facilities situated in the Sacramento Delta are designed to be operated even under flood conditions. Information about this design basis is not included in emergency plans, but can be found in the engineering documents associated with their construction. Similarly the footings of electric transmission towers in the Delta are designed in such a way as to keep the towers operational in flood conditions.

In addition, as part of PG&E's emergency exercise program, levee breaks are occasionally introduced in scenarios to test PG&E's ability to respond. The 2008 Company Exercise, which was a Hayward Fault earthquake scenario, included notional breaches to 15 levees, resulting in simulated flooding in the Delta and operational issues at McDonald Island. Exercise participants addressed these notional problems successfully. Materials from this exercise were not published, and the brief exercise summary that was submitted to the CPUC did not include specifics about levees, which were a minor part of the exercise.

Mr. DENHAM. Thank you. And as far as the statewide pipeline safety plan, when do you expect the PUC to issue a final decision?

Mr. SIMON. Mr. Chairman, with all due respect, I hate to give dates when due process is involved, but we are expecting, I believe, a decision on the investigation and the rulemaking at least—well, there are two aspects of it. There is the PG&E explosion and the proceedings that involve that, both the investigation and the rulemaking, and that is assigned to my fellow commissioner Mike Florio. I do expect decisions on that going forward within 2012.

The actual pipeline enhancement and safety, which is approximately \$17 billion between SoCal Gas and PG&E over a 10-year period, I will expect as those decisions are published that there will be a lot of comments and other actions taken by consumer advocates, first responders, even some of the agencies that are represented here today.

So it would be very difficult for me to give a final date, but I would expect in 2013.

Mr. DENHAM. Thank you.

Mr. Coate, with East Bay MUD, obviously water is a huge issue, supplying water to the entire Bay area. In 2004 when the Jones Tract levee broke, that wasn't weather, it wasn't an earthquake, it was just the failure of a levee. What would happen if we had an earthquake? What would be not only the damage to the water supply but the Bay area receiving the majority, if not all of its water in this area, what would be the impacts of East Bay MUD?

Mr. COATE. Mr. Chairman, you are speaking of an earthquake in the Delta?

Mr. DENHAM. In the Delta, yes.

Mr. COATE. There is a high probability if there is an earthquake in the Delta that we would revisit inundation like we saw at Jones Tract, and also potential to actually compromise the aqueducts

themselves. East Bay MUD has been working to anticipate such an event, and I described in my oral testimony a number of the things that we put into place.

But essentially we would embark, once the aqueducts were accessible and the tract dried, in a repair effort, and we have allowed ourselves 6 months of supply which we store west of the Delta in order to be able to continue to provide water to our customers. That is under severe rationing conditions. So I can speak briefly on the economic impacts, not only the cost associated with repairing the aqueducts, which would be to be determined but relatively small when compared with the economic costs to the Bay area.

In recent years we have done some long-term water supply planning in the context of trying to understand the value of supplies west of the Delta, such as recycling supplies that we have actually received some funding through the Water Resource Development Act to construct. In the context of looking at the value of those supplies, we have done an economic study, and if we had to ration, severe rationing for a year, it would have an economic impact of about \$1 billion, actually more than \$1 billion, to the East Bay economy.

So you are looking at compromising water supply, but you are also looking at compromising the way of life in the Bay area.

Mr. DENHAM. Thank you.

Mr. McNerney.

Mr. MCNERNEY. Thank you, Mr. Chairman.

My next two questions are going to be addressed to Mr. Coate. Do you believe that investing in levee protection would benefit both water flows and mitigate flood protection?

Mr. COATE. Yes. We, in fact, have been working with five other water agencies, several of which are very focused on the Bay Delta Conservation Plan. Those include East Bay MUD, San Francisco Public Utilities Commission, Contra Costa Water District, Santa Clara Valley Water District, Alameda County, and the Metropolitan Water District, and together we have identified that it is very important to protect a number of levees. We have submitted a letter to the State, to John Laird, and helped him appreciate where we think resources should be expended to protect levees, and in so doing protecting the water supply that flows through the Delta to the export pumps, but also the water supply that flows to the East Bay and San Francisco South Bay communities.

Mr. MCNERNEY. Thank you. You mentioned the need for clearly defined roles within a disaster response plan. Can you elaborate where we are with the current system? Is it adequate? Are there well-defined roles, or is there still a little bit of ambiguity that would cause problems in a disaster?

Mr. COATE. Well, there has been a lot of improvement over the years and a lot of improvement since 2004. There has been discussion here about the recent report that was prepared which included a number of recommendations going forward. Those recommendations are consistent with what we would like to see happen, clearer coordination and responsibility. But as Mr. Baldwin explained, it would be good to see some clear commitments to providing authorization for financial resources that would allow an immediate re-

sponse when a levee failure is being observed so that we could control the damage and protect the infrastructure.

Mr. MCNERNEY. Thank you. That is a good answer.

Mr. Murphy, what do you think the biggest obstacles are in implementing the task force's recommendations?

Mr. MURPHY. I think the biggest obstacle is exactly what Mr. Baldwin said and what has already been brought up. The biggest obstacle to some of this is just pure financial. You have the maintenance side of the levees, and this goes all the way from very small reclamation districts all the way through East Bay municipal district, one of the biggest utility providers in the State. You have a clear need to maintain all these levees at a standard—I also shy away from the 100-year scenario, but you have to maintain whatever level you set, and that is just a reality. It is a very difficult thing to do in this environment. That is the biggest obstacle.

On the response side, the actual first responders on the levee after something has happened, our biggest obstacle is probably exactly what Mr. Baldwin said, and we are working through it, how to figure out the best way to make sure that everybody is on the same page, that you are going to get reimbursed for what you are spending in that initial hour after the event happens, and I think we are significantly further ahead 8 years later after Jones Tract than we were in 2004.

That doesn't mean it is going to be perfect, but I think we all, especially in the State, understand this is what we are going to do, we are going to make these movements, and then we are all going to stand on the same platform and say we have done it all in good faith, and now we should be reimbursed for that as well.

Mr. MCNERNEY. Well, the first part of your answer, lack of funds, is interesting because in Mr. Baldwin's testimony he said, well, there are sufficient funds, they are just not coordinated in a way that would benefit emergency preparedness. Could you address that, Mr. Baldwin?

Mr. BALDWIN. Well, I am just saying that it is a fact. I mean, the Department of Water Resources has bond funds that they are spending internally, and that is good. They just announced the imminent release of grants to local governments for flood preparedness projects. The last figure I heard, and I am not an authority, is \$14 million. The Corps of Engineers has ongoing funds that they are spending on a Delta emergency response plan. The Central Valley Flood Protection Plan program has announced funds going down to the regional basis that could be used for flood preparedness.

We have this historic opportunity because of the bonds. Thanks to the people of California in 2006, there are some funds. And thanks to the Federal Government, the Corps money I believe is coming through CalFed, or whatever. There is quite a bit of money.

We haven't had the two components come together. Now we have the strategy. That was released by the Governor this year. Now we have the funds. All I am saying is I think some kind of high-level coordination should say, OK, these funds will cover this aspect, these funds will cover this aspect. We will just ensure that 3 years down the road these different funding streams will make sure that the strategy was addressed and that we got it done, because in a

few years those bond funds are going to be gone and then we will be back to where—we will just stop right at, well, where are the funds?

Mr. MCNERNEY. Thank you, Mr. Chairman.

Mr. DENHAM. Mr. Shuster?

Mr. SHUSTER. Thank you. Back to another topic to deal with funding that Mr. Baldwin brought up, directed to Mr. Fenton. Mr. Baldwin mentioned that, in these different jurisdictions, the county may be able to help one of these local reclamation districts, but they can't do it because they are concerned they are not going to get paid for it.

Is there a mechanism in place, or is there a process, or do you have the authority to look at a situation and use common sense to say, hey, they are going to fix this, we need to do it, let's move forward with it and make sure they get their money?

Mr. FENTON. Sure. Well, there have been a couple of changes since the 2004 Jones Tract. One is that we signed a Delta Memorandum of Understanding for the public assistance program that clarifies some eligibility that existed in previous documents, as far as requirements for maintenance of the levees, and also how we would reimburse them.

But specifically to the question of how do you do things immediately, essentially our program allows us to reimburse the eligible applicant, the person who owns or is legally responsible for that infrastructure. Typically what happens is, through MOUs or agreements, other entities come over and support them. As long as those agreements are in place, it allows us to make sure that the reimbursement mechanism can follow and we are able to support it.

Essentially, what we are not going to do is penalize someone for responding. We just want to make sure that we are following the law and are able to reimburse those who are the actual owners of the facility, the eligible applicant. We understand that in some cases, through mutual aid agreements, that other resources come over and support, and we have the means to reimburse when that happens.

We have the means to reimburse something within minutes of a declared disaster. So it is not that they should be waiting—money shouldn't be a factor. The decisionmaking a lot of times, even on fires, is able to provide immediate funding right upfront.

Mr. SHUSTER. So if one of these districts has an MOU with the county, then—

Mr. FENTON. Yes, there are systems in place in the State, and Brendan can probably speak to it better than I can. But within the State of California, there is the State Emergency Management System, the SEMSYS, in which they move resources around. So as long as a request goes through that system and it falls in that mutual aid system, then we reimburse upon that. For circumstances where we would not do it, I would have to have a specific issue and look back and see why we did not reimburse.

Mr. SHUSTER. Mr. Murphy, it looks like you want to say something.

Mr. MURPHY. Absolutely. Where we went between 2004 and 2010, when we signed our Memorandum of Agreement with FEMA, was exactly on that. In 2004, there was a little bit more—even

though entities were directed inside of our system to do specific things in relation to the response, we had that kind of initial problem of who—the reclamation district owns it; now you have other people doing the response work because the reclamation district couldn't do it itself. How do we go from there?

What our Memorandum of Agreement says is that if we are inside the system, and the State, as well as our local agencies, have requested the help, and we have sent the resources, that FEMA recognizes that it is all part of the master mutual aid agreement which was signed in 1953 in the State, thereby allowing that work to occur.

Mr. SHUSTER. And one more question that has to do with WRDA. Mr. Coate, you brought up Congress doing a WRDA bill, which we need to do that. We were thinking we were going to get it done, at least attempt this year. I doubt it. We don't have enough time, but it is something we need to go after next year.

So you mentioned about WRDA. Did you have very specific ideas, or are they sort of general, that you laid out there? I looked through your testimony. I couldn't see that you had any real specific ones.

Mr. COATE. Thank you for the opportunity to speak about that. Currently, what we see in—specifically, WRDA has provided funding for primarily recycling projects that increases our reliability west of the Delta. We have a lot more opportunities in that arena we would love to explore.

What we have seen in WRDA is that there are resources for flood control, but they are focused primarily on long-term planning, and it would be good if WRDA could acknowledge that there is plenty of levee repair work that could be done on the immediate, and if funding could be made for improvements today, that would be valuable. It would also be helpful if WRDA looked and acknowledged that, very broadly, reliability, interconnection between water systems, which are expensive to construct, help mitigate the impact if there is an earthquake, as I described earlier.

So those sorts of program authorizations would be very helpful for the water community.

Mr. SHUSTER. If you have any other ideas, if you could put them in writing to us because, as I said, next year it will be something I am sure we are going to try to tackle, and hearing from folks in the community, sending them through Mr. Denham's office or however you could get them, would be very helpful to us as we move forward.

Mr. COATE. Thank you for the opportunity.

Mr. SHUSTER. I yield back.

Mr. DENHAM. Thank you. This will be our final round of questioning, but this committee, as well as other committee members that aren't here today, will be offering questions to all of our witnesses, and we would ask you to respond to those in an expeditious manner.

In the final round I have quite a few things I want to cover in just wrapping up.

Mr. Murphy, this is a basic question I would like to ask each of you. Who is responsible for paying for the maintenance and upkeep of these levees, in your opinion?

Mr. MURPHY. Each and every reclamation district that owns them. That is the primary. Maintenance and upkeep, that is what they are doing. They are there to control that levee and move water through there.

Mr. DENHAM. Mr. Baldwin, maintenance and upkeep?

Mr. BALDWIN. Right. Basically, whoever—I mean, if the Corps or a private entity comes in and builds a levee, then there is some agreement. If it is a Corps levee, who is going to maintain it? In some cases it is the State, for the most part. In the Delta, it is going to be reclamation districts.

I would only point out one thing. They get the money to do the maintenance. They get the money to do the emergency response from property assessments, so the farmers out there and the property owners. But if there is a highway going through there and that district is protecting it, they get no additional money. I compliment East Bay MUD that actually go through there and assist with cash flow. This is the problem. That is why there is a lot of time when districts are protecting a lot of very valuable infrastructure but don't have that cash flow to maybe do the maintenance properly or to do as well as they would like, or to do the emergency response, and the other agencies have to come in, and we get into some of these complications.

So I think it is the old way. A hundred years ago, that is it. You built a levee, you are protecting your farm, you ought to pay for the maintenance, you know? But now we have laid on highways and aqueducts and all sorts of infrastructure. We transport water and everything else, and we never really updated the way that that reclamation district system works, where they can maybe get some cash flow from some of those other beneficiaries to maintain the levees, and also for emergency response.

Mr. DENHAM. And as well on upgrades, especially in areas where you have different jurisdictions or different types of infrastructure, in your opinion, where should the money for upgrades come from?

Mr. BALDWIN. That I think is a shared State-Federal—I mean, the Federal Government more or less sets, to a certain extent, the standards, because of the flood insurance program, of what kind of levee you need to have, and I think that is the debate that is going on, what should be the standards for the levees. Once that decision is made, then I think it is shared. I mean, it is public good for the Delta, so the public, through the Federal and State governments, should bring them up to standard. The reclamation districts, then, should be able to have enough cash flow to maintain them properly and at the same time respond in an emergency, and we should fix that system to where they will have sufficient funds from all the beneficiaries to do that after maybe the Federal or State, a Corps project, something comes in and actually brings the levee up to the standard that we decide is adequate for that area.

Mr. DENHAM. Thank you, Mr. Baldwin.

Mr. Simon, upgrades?

Mr. SIMON. Yes, Mr. Chairman. For investor-owned utilities, and it may actually apply to our public utilities as well, it is somewhat of a mixed bag. I think to the extent that reinforcement of properties that the utilities have been granted through eminent domain or reverse condemnation, and for purposes of that infrastructure,



that pipeline infrastructure, they will typically seek recovery from ratepayers by way of an application or some type of tariff filing. Whether or not the ratepayers pay the entire amount or it is apportioned between ratepayers and shareholders, then that would be our distinction, for example, in East Bay MUD, would be determined by way of decision.

Now, I would say that if a utility had infrastructure that sat or was laid in a reclamation district or a jurisdiction where the resources were available by way of assessment, Federal, State or local funding, I would think that they would seek those resources for purposes of protecting the infrastructure to reduce the cost to their ratepayers and shareholders.

Mr. DENHAM. Thank you.

Mr. Coate.

Mr. COATE. Well, East Bay MUD has taken the position for many years that we should make investments in the levees. So we have spent over \$15 million in levee improvements to protect our aqueducts, but also to protect all of the other infrastructure adjacent to it.

Reclamation districts, as was described, are cash limited. So by us making the financial contributions, we have been in a position to support the reclamation districts, obtaining money from the State. The State typically doesn't pay 100 percent. They would provide or expect to cost-share. So more recently, working with our local reclamation districts and the Delta Stewardship Council, East Bay MUD made a contribution of on the order of \$6 million, and in so doing leveraged about \$33 million worth of funds. The majority of those funds have been put in the ground, making significant levee improvements, probably some of the most significant improvements that have been done in recent times.

Mr. DENHAM. Thank you.

And finally, Mr. Fenton, from a FEMA perspective?

Mr. FENTON. With regard to maintenance, sir, basically our programs fund identification of risk, responding, recovering and mitigating from disasters, but it does not cover costs for maintenance. That is the responsibility of the owner or the sub-grantee in our case.

With regard to upgrades, we do have some ability within our regulations, within the PA program, to do improved projects and look at some of those kinds of things. Also, there are mitigation funds. But, generally, we don't pay for upgrades, and that is specific to FEMA, of course. Other Federal agencies, the Army Corps of Engineers, NRCS, have different programs that may be applicable here.

Mr. DENHAM. Thank you.

And finally, I have one final question. Mr. Simon, you highlight in your testimony that ensuring the communications and telephone service work during emergencies. As you may know, the Integrated Public Alert and Warning System Modernization Act, it was included as part of my bill, H.R. 2903, the FEMA Reauthorization Act. The bill authorizes IPAWS and establishes a framework to ensure key stakeholders are at the table as FEMA continues to develop its system.

From your experience, how important is it to ensure information can get out to the public during a disaster, especially one that

could shut down many different roads and could be flooding a huge area?

Mr. SIMON. Mr. Chairman, I think it is critical. One of our most fire-prone areas actually is in southern California—that is the San Diego region—due to the Santa Ana winds, as you are well aware. Between 2003 and 2007, there were 13 fatalities that occurred in that region. I held workshops there in the Riverside-San Bernardino area, which was also affected, and I heard accounts from first responders where they had to use their personal cell phones because the system that either the police or fire were utilizing was not operative and/or interoperative.

There was a case in the Inland Empire where reverse messaging was coming from a vendor in Florida. Because residents did not recognize the area code, they thought it was some type of marketing call and did not answer the messaging that was being sent for purposes of evacuation.

So I think it is critical that our emergency response capabilities, with residents in particular, is commensurate with the technology choices that are being made by our citizens for purposes of communications, and that we have the type of messaging, reverse 911, enhanced 911 capacities that can reach our residents in a time of crisis and give them the proper instructions to save lives and property.

Mr. DENHAM. Thank you. That was the answer I was looking for. As Mr. Shuster said, we have the FEMA reauthorization bill that has already come out of committee. IPAWS is part of that communication piece of it, and I am looking forward to pushing that as we go back in September and trying to get that through both bodies, both Houses, before we adjourn in the 112th Congress.

Mr. McNerney.

Mr. MCNERNEY. Thank you, Mr. Chairman.

One of the interesting things that has come out, in my opinion, is the availability of funding, and there does appear to be money available.

Mr. Fenton, does the FEMA have sufficient jurisdiction to be able to help direct funds where they are needed from the appropriate sources for levee protection?

Mr. FENTON. I think the authority for the Delta area is a combination of different Federal agencies that have the authority and resources to do that. Some of it exists for the levees within the Delta, some of them are Federal levees. The Public Law program is the Army Corps of Engineers. Some of them fall underneath NRCS's program. I know Department of Interior has been working on plans with regard to some of the issues they know of with regard to—

Mr. MCNERNEY. Excuse me, but that sounds like part of the problem. We need—and I think it is good testimony—an agency that can direct the funds where they are needed. If we have all these different agencies that have jurisdiction, then it is all going to be piecemeal. We are not going to get the real work that we need to get done.

Mr. FENTON. I understand. It is such a complex issue. When you start looking at the expertise of the different agencies, FEMA does not have thousands of engineers like the Army Corps of Engineers

does, and it is not a skill set that we would be good at doing without having their experience and capability and hundreds of years of doing flood fights and levee work throughout the country on water conveyance-type structures.

For a problem like this, I think it is good that a task force is coming together at the State and local level to address it. Federal agencies have to be included in that, because there are different capabilities through authorities at the Federal level that need to be integrated in that. I think integration and some mechanism to ensure consistency and collaboration is probably better than trying to move with just one agency, just because of what we do with our specific missions throughout the rest of the United States.

Mr. MCNERNEY. Well, I don't have the Corps of Engineers here in front of me. So what I would like to ask is that either you or Mr. Murphy give me some sort of assurance that money is going to be there for levee protection and enhancement no matter what happens with the BDCP, and I don't have that feeling, and it is a concern to me and to the district, to the region.

Mr. MURPHY. Congressman, at the State level, I can tell you right now, as Mr. Baldwin mentioned, that proposition money that is available from 2006, we have coordinated with the Department of Water Resources, who controls the emergency aspects, as well as the upkeep of all of their own levee system, and the emergency planning, especially the long-term emergency planning, has been a priority for them and is a priority for them.

But I think, honestly, your question is a good one, because at the Federal level, there are multiple agencies that have a piece of this project. It is not an easily answered question.

So at a State level, I can assure you, we actually sit with the Department of Water Resources and review the applications that come in, and you are going to have the highest priority, the best value, the best bang for the buck as far as from the reclamation districts mostly in that case.

At the Federal level, though, that is a coordination aspect because there are so many entities involved in the process where we probably do need some work.

Mr. MCNERNEY. Who do we go to if we are finding the levee money is drying up because of being directed towards the BDCP?

Mr. MURPHY. You know, I think that Ron has probably had more headaches with this than even I have. But there are—literally, it is not a one-stop shop. It is the people who are in this game have to go to each and every one. You have to approach the Army Corps of Engineers. You have to approach the Department of Interior. That is just the process that we have had to take at a State and local level over the years.

Mr. BALDWIN. Well, I think the point I was making and the money I am speaking of—I mean, there are kind of two issues. It is the money for the construction of the levees, and I don't know if it is really the maintenance. I would say the construction and the improvement of the levees, a lot of that is coming out of the bond funds through other programs, as well as any authorizations that Congress may have for the Corps to assist with an upgrade of a levee.

I am really talking about the flood fight, the emergency response. I am just saying that there are quite a bit of funds currently coming down. We didn't have the strategy a year ago. We do have it now, and it seems to me good public policy that some document be issued to say, OK, there are six different things coming down, and I have good faith in the agencies. So to say, OK, Corps, what are you doing? How does that fit into the strategy? Here is what they are going to address, just to make sure we don't duplicate efforts, and at the same time make sure that the entire strategy is implemented.

The second thing is just to have a mechanism to make sure about quality control, that whatever we got done got done to the standards that we all agree it should have been.

Mr. MCNERNEY. Thank you, Mr. Chairman.

Mr. DENHAM. Thank you.

Mr. Shuster.

Mr. SHUSTER. Thank you, Mr. Chairman.

A question to Mr. Murphy and to Mr. Simon. Mr. Simon, you mentioned that the CPUC, after the San Bruno pipeline explosion, put some things in place. But can you sort of talk a little bit about what have the natural gas pipeline operators, what have they done themselves? Are they complying? Is it a smooth process going forward, such as PG&E, to improve their gas emergency response processes?

Mr. SIMON. They are in that process now, actually. The legislation was approved in the last session, and from all indications I believe San Bruno was the unfortunate wake-up call, and I believe all gas operators, if they didn't understand before, understand now the importance of having protocol in place to deal with a disaster when it happens.

Gas transmission infrastructure is a necessity for our society. It has to run through densely populated areas. So my response to that would be that I believe, again with our Consumer Protection and Safety Division and the pipeline operators throughout the State, that those cooperative efforts are moving along in an effective fashion.

Mr. SHUSTER. Mr. Murphy?

Mr. MURPHY. I think the coordination with local first responders, as well as the State, has absolutely been heightened from it, without a doubt, and not just PG&E but across the State. I am not going to discount that a lot of that has been the public message you get when a horrific event like that happens, and other private vendors look at that and say we don't want that to be us.

But that has been a great benefit at this point as far as from that local first responder and knowing what is in your backyard. That has been one of the biggest issues, is where are the pipelines and the disclosure of that. CPUC has been a huge help in having that.

We have taken many steps. I think the reality, though, and where the CPUC is working forward, is that the long-term replacement of much older pipelines and really what has to happen there inside California. I think where we are at, though, is significantly light-years ahead of where we were a few years ago, prior to the San Bruno incident.

Mr. SHUSTER. My second question was about the emergency responders, and you did say they are coordinating with and building relationships, so it is much better.

Mr. MURPHY. Oh, like I said, they—and I am somewhat biased because PG&E did hire one of our former employees on the gas side. But the difference is light-years, and what it is, especially those for-profit utility providers are fully engaged in not wanting to have anything like this happen again.

I am sure, as a for-profit entity, there are some limitations. But at least on that first responder and State and local, here is where we are, here is what we are doing, and here are the potential issues we could have in this area.

Mr. SHUSTER. Thank you very much.

Thank all of you for being here today.

Mr. Chairman, I yield back.

Mr. DENHAM. Thank you. I thank each of you for your testimony. Your comments have been very helpful in such a short hearing. We will be following up as an entire committee with further questions.

If there are no further questions from here, I would ask unanimous consent that the record of today's hearing remain open until such time as our witnesses have provided answers to all of our questions that have been submitted to them in writing, and unanimous consent that the record remain open for 15 days for any additional comments and information submitted by Members or witnesses to be included in the record of today's hearing.

Without objection, so ordered.

I would like to thank our witnesses again for their testimony today, and if no other Members have anything to add, the subcommittee stands adjourned.

[Whereupon, at 11:21 a.m., the subcommittee was adjourned.]

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**Congressman John Garamendi's Testimony before the House Transportation and Infrastructure Committee Subcommittee on Economic Development, Public Buildings and Emergency Management on California's Sacramento-San Joaquin Delta: Planning and Preparing for Hazards and Disasters**

August 16, 2012

Chairman Denham, Ranking Member Norton, and Members of the House Transportation and Infrastructure Committee Subcommittee on Economic Development, Public Buildings and Emergency Management, thank you for the opportunity to testify on disaster and emergency preparedness measures for California's Sacramento-San Joaquin Delta. It's an honor to be before you today.

I represent the 10<sup>th</sup> District of California, encompassing the Sacramento-San Joaquin Delta, the Suisun Bay and three of the five Delta counties. Currently thousands of Delta residents living in my district and the surrounding area are all dependent on a complex network of flood control infrastructure to protect their livelihoods. The rich, fertile soils of the Delta support a \$2 billion agriculture industry with over half a million acres being actively farmed. The Delta is also home to a robust fishing and recreation industry. According to the Delta Protection Commission, the recreational boating and fishing industries in the Delta support over 14,000 jobs. In addition to the economic productivity within the Delta region, the Delta provides fresh drinking water to over 25 million Californians. For all of these reasons, every Californian has a vested interest in the sustainability of the Sacramento-San Joaquin Delta.

Today we meet to discuss important disaster preparation and hazard mitigation measures designed to protect Delta residents and the state's economy in the case of a catastrophic flood. In 2008, the Sacramento-San Joaquin Delta Emergency Preparedness Act of 2008 established the Sacramento-San Joaquin Delta Coordination Task Force consisting of representatives from Cal EMA, Department of Water Resources, and the Delta Counties of Contra Costa, Solano, Yolo, San Joaquin, and Sacramento. In January 2012, the Task Force culminated its work with the release of the Sacramento-San Joaquin Delta Multi-Hazard Coordinated Task Force Report, in which the Task Force lays out a set of specific recommendations for how to best prepare and respond to a flood emergency. I applaud the Task Force for their hard work and dedication to this issue, and these recommendations provide an important framework for moving forward. I also recognize, as stated by the Task Force, the challenges associated with implementing the recommendations, particularly when it comes to funding. As a Member of Congress representing this region, I am committed to working with Cal EMA, the Delta Counties, and my colleagues in

Congress to find federal funding streams necessary so that the Task Force recommendations can be realized.

In addition to implementing disaster response strategies, we must also look at ways to reduce risk. There is no question that the state of flood control infrastructure in the Delta is in dire need of investment and repair. There is also no question that California is earthquake prone and that the sea level is rising. A study commission by the state estimated that a catastrophic levee failure in the Delta would cost water users in the range of \$8 billion to \$16 billion, depending on season and length of time required to restore water deliveries. This doesn't even take into account the thousands of lives that would be at risk, the tens of billions in property damage, impacts to key infrastructure including several major highways and gas and power lines, and losses to Delta agriculture. These figures clearly demonstrate why risk reduction is so critical, and recent reports indicate that armoring key Delta levees is possible. Both the Delta Protection Commission and the Public Policy Institute of California estimate the cost of seismic levee upgrades to be between just \$2 billion and \$4 billion. A simple cost comparison implies that a small investment in Delta levee improvements could avoid much larger economic losses down the road.

This discussion ties in directly with Governor Brown's July 25th announcement regarding the direction that the Bay Delta Conservation Plan (BDCP) is headed. The current BDCP proposal calls for dual conveyance with water being pumped both around and through the Delta. This means exporters will continue to rely on the Delta and its levees to transport the water even after a conveyance facility is built. Yet, BDCP documents that were recently released show that the Plan fails to include any provisions regarding necessary improvements to the Delta's levee infrastructure. As previously stated, existing cost estimates demonstrate that seismic levee upgrades can be completed for significantly less than the cost of a 9,000 cfs facility and in a shorter period of time. This further highlights the need for a complete statewide cost-benefit analysis of the BDCP, and as the BDCP process moves forward, the plan must incorporate a strategy to strengthen the Delta levees. Both the Federal and State governments have used Delta levees to transport water to their contractors for nearly 80 years and will continue to do so under any dual conveyance proposal. Yet over the decades neither government has undertaken any rudimentary maintenance program, and it's long past time to do so. There ought to be law requiring government investment in the levees, and this committee should support such an effort.

In addition to improvements in Delta levees, there are other ways to minimize risk of catastrophic flood and impacts on water supply. One of these approaches, according to the Public Policy Institute of California, is by increasing storage capacity. Storage projects, such as expansion of Los Vaqueros, construction of Sites Reservoir, and conjunctive management of aquifers, deserve thorough analysis and attention. These key investments have potential to increase water supply for both water users and habitat, provide flexibility in timing of water deliveries, and ensure that California has a backup supply in times of drought or in the case of a levee breach. We must also be exploring and investing in new technologies to expand water recycling and conservation. Water recycling in Southern California could increase water supply by more than one million acre feet and help reduce Southern California's reliance on the Delta. For these reasons, I am committed to working with the Bureau of Reclamation, Contra Costa Water Agency, the Sites Reservoir Joint Powers Authority, water recycling agencies across the

state, and others to ensure that the feasibility studies for storage, recycling, and conservation projects move forward in the most efficient, cost effective, and collaborative way possible.

The Sacramento-San Joaquin Delta Multi-Hazard Coordinated Task Force Report is an important step for preparing and mitigating future flood disasters in the Delta, and my hope is that this report sheds light on the serious need for prevention measures. A comprehensive solution to California's water problems must include levee improvements, storage, recycling, conservation, and Delta restoration. These measures, when carried out together, rather than the current piecemeal course that the BDCP is on, will strengthen the Delta, protect and create additional water supply, and shield the state's economy from the impacts of a flood. I look forward to working with this committee, the state, the federal government, and all of the stakeholders on implementing the Task Force's recommendations and on a comprehensive water vision that will ensure a long-term, reliable water supply for all Californians.



Testimony of  
 Mr. Robert J. Fenton, Jr.  
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 Federal Emergency Management Agency  
 U.S. Department of Homeland Security

Before  
 House Committee on Transportation and Infrastructure  
 Subcommittee on Economic Development, Public Buildings, and Emergency Management  
 August 16, 2012

### **Introduction**

Good morning, Mr. Chairman and Members of the Committee. My name is Robert Fenton, and I am the Assistant Administrator for Response in the Office of Response and Recovery at the Federal Emergency Management Agency (FEMA). As a fifth generation San Franciscan, I have spent a lot of time in the California Delta region. I came to my current role in 2009 after 13 years of service with FEMA's Region IX Office in Oakland—which serves Arizona, California, Nevada, Hawaii, Guam, American Samoa, Commonwealth of the Northern Marianas, Republic of the Marshall Islands, and the Federated States of Micronesia. During that time, I supported the response to major floods in the California Delta in both 1997 and 1998, and I appreciate the opportunity to return home to discuss FEMA's support of current planning and preparedness efforts in this region.

As you may know, the Sacramento-San Joaquin Delta is a region where two of California's largest rivers meet. Freshwater from these rivers meets saltwater from the Pacific Ocean, creating the West Coast's largest estuary and supporting a unique and delicate ecological environment that forms the hub of the State's water distribution system. Over 1,100 miles of levees create 57 leveed island tracts, some of whose surface can be 20 feet or more below the outside water level. Two-thirds of all Californians, about 23 million people, and millions of acres of irrigated farmland, part of a \$27 billion agricultural industry, rely on the Delta for water. Disruption of this water flow resulting from any number or combination of disasters would have a devastating effect on California, creating widely felt impacts across the Nation.

Through our Region IX Office, FEMA and our partners have been deeply engaged in addressing the long term water-related issues in California through a Whole Community approach. This approach to emergency management engages not only Federal, State, local, tribal and territorial governments, but also the private sector, non-governmental organizations, and the public to collectively understand and address community needs. FEMA has joined with partners across this Whole Community to implement cooperative policies that assure adequate, safe, and dependable water supplies for the people, businesses, and institutions of not just California, but also in Arizona, Nevada, Hawaii, Guam, and other U.S. interests. This engagement is achieved primarily through water-focused joint planning efforts and exercises with our partners.

### **Planning**

FEMA's "Whole Community" initiative recognizes and seeks to leverage the capabilities that both governmental and non-governmental entities can contribute while preparing for and responding to catastrophic disasters. FEMA has long coordinated and facilitated the development of detailed state and regional catastrophic response plans for earthquakes, hurricanes, tsunamis, improvised nuclear device attacks, and other threats.

Most recently, FEMA and our partners have conducted these planning efforts in support of Presidential Policy Directive – 8 (PPD-8), which directed the Secretary of Homeland Security to develop a national preparedness system that defines the core capabilities necessary for the Nation to prepare for incidents of greatest risk. This system will include a series of integrated national planning frameworks covering prevention, protection, mitigation, response, and recovery, and will inform planning in support of these frameworks at every level of government through a new National Planning System.

As we work to implement PPD-8, our planning assumptions for catastrophic disasters continue to be based on worst-case scenarios—they are designed to challenge preparedness at all levels and force innovative, non-traditional solutions as part of the response and recovery strategy to such events. FEMA and our partners seek to identify the highest priority tasks necessary to save and sustain lives and stabilize a catastrophic incident during the crucial first 72 hours, and have begun to work across all segments of society to identify how we can collectively achieve these outcomes. While the initial 72 hours after an incident are the most critical in saving and sustaining life, our approach spans not only response operations following a disaster, but also prevention, recovery, protection, and mitigation activities that occur before, during, and after a catastrophic event. Through full engagement with the Whole Community, this planning results in the development and identification of existing capabilities that can be employed using pre-established logistics protocols and deployment solutions.

In addition to national all-hazards planning, FEMA conducts regional catastrophic planning to address area-specific disaster scenarios which present greater likelihoods of occurrence based on location. Much of this work is coordinated through our Regional Interagency Steering Committees (RISCs), which are senior-level entities that address operational and preparedness issues related to response and recovery activities in FEMA's ten regions.

In California, the San Francisco Bay Area Earthquake Response Plan (published September 23, 2008) and the Southern California Catastrophic Earthquake Response Plan (published December 14, 2010) describe joint State and Federal response to catastrophic earthquakes using input from thousands of emergency management professionals at all levels. Included in the many challenges addressed in these plans is the damage to water infrastructure systems, including water distribution, treatment, and sewage systems, resulting from earthquake ground-shaking.

In addition, the Cascadia Subduction Zone Planning Project represents a Whole Community partnership working to develop a disaster response plan based on a magnitude 9.0 earthquake along the 800-mile long Cascadia Subduction Zone. "Cascadia" is located just off the Pacific Northwest Coast, and the subsequent tsunami affecting the west coast of the United States and

Canada would devastate a vast array of infrastructure and systems, including water delivery and disposal. The disaster response plan created by the Cascadia Subduction Zone Planning Project will outline response activities and collaborative efforts to be implemented in the immediate aftermath of an earthquake along the subduction zone. The plan is expected to be finalized by September 2012.

In conjunction with broad-based planning efforts like our catastrophic and hazard-specific planning, FEMA continues to partner with the State of California to prepare for catastrophic disasters like earthquakes in the densely populated Los Angeles and San Francisco metropolitan areas. Essential to these efforts is a shared and coherent analysis of threats to potable water production and distribution in communities at risk for severe ground-shaking. Collaborative earthquake planning (e.g., Catastrophic Southern California Earthquake Plan) has helped support the development of emergency plans with contingencies to:

- Maintain flow and pressure in the pipes to and from water treatment plants and pumping stations during disasters.
- Provide potable water to sustain life and support health and sanitation needs during disasters.
- Return the quality and quantity of water to pre-disaster standards.

FEMA also works with partners in emergency management to re-establish transportation networks, gas and electrical power, and sewage treatment in the aftermath of major incidents. As a result of the many planning efforts in this area, task forces have been established for the temporary repair of water distribution facilities and the delivery of potable water in the aftermath of a California earthquake.

Moreover, FEMA is part of the National Earthquake Hazard Reduction Program (NEHRP) along with the U.S. Geological Survey, the National Science Foundation and the National Institutes of Standards and Technology. The four NEHRP agencies work in close coordination to improve the Nation's understanding of earthquake hazards and to mitigate their effects. The missions of the four agencies are complementary, and the agencies work together to improve our understanding, characterization, and assessment of hazards and vulnerabilities; improve model building codes and land use practices; reduce risks through post-earthquake investigations and education; improve design and construction techniques; improve the capacity of government at all levels and the private sector to reduce and manage earthquake risk; and accelerate the application of research results. All four agencies are responsible for coordinating program activities with similar activities in other countries.

### **Preparedness**

In addition to our planning efforts, FEMA brings together emergency management professionals across the Whole Community to improve preparedness by exercising current plans and uniting individuals in the field of emergency management. As part of the 2008 California State-wide "Golden Guardian Exercise," FEMA and the California Emergency Management Agency (Cal EMA) joined other state, local, tribal, governmental, and non-governmental stakeholders exercising the San Francisco Bay Area Earthquake Plan. This year's Golden Guardian Exercise

includes a test of the Southern California Catastrophic Earthquake Response Plan, including the establishment of a water conveyance task force to assist with the restoration of potable water deliveries following a magnitude 7.8 Southern San Andreas Fault earthquake.

The scenario in this year's Golden Guardian Exercise parallels that of the ShakeOut Scenario, published in 2008 by the U.S. Geological Survey, Multi Hazards Demonstration Project (MHDP). MHDP provides decision-making information for loss reduction and improved resiliency by engaging emergency planners, businesses, universities, government agencies, and others in preparing for major natural disasters by using hazards science to improve community resiliency. MHDP's ShakeOut Earthquake Scenario was created by a team of more than 200 scientists and experts who examined in detail the geophysical, physical, and social implications of a massive earthquake, including impacts to water conveyance. This scenario served as the centerpiece of the largest earthquake drill in United States history, involving over 5,000 emergency responders and the participation of over 5.5 million citizens. ShakeOut has evolved into an annual statewide event and has formed the basis of federal and state catastrophic earthquake plans.

FEMA has also supported MHDP's efforts in exercises like ARkStorm, an emergency planning scenario associated with hypothetical severe and sustained winter storms striking California over a period of several weeks. FEMA's flagship emergency-planning software, HAZUS-MH, was used for estimating physical damages in the ARkstorm scenario, and teams including FEMA members helped generate and review flood maps for the hypothetical scenario. This exercise not only ensured California electric utility providers are familiar with FEMA reporting and the appropriate forms for financial relief, it recognized the need for resiliency and additional research regarding wastewater services, improvements to be supported by FEMA's Hazard Mitigation Grant Program.

To further promote awareness and preparedness efforts surrounding the Sacramento-San Joaquin Delta, the FEMA Region IX Office in Oakland, California has established a Memorandum of Understanding (MOU) with Cal EMA related to disaster assistance in the Delta area. The purpose of the MOU, which was executed in February of 2010, is to establish criteria regarding the potential eligibility for FEMA's Public Assistance (PA) program funding in the special reclamation districts in the Sacramento-San Joaquin Delta area. The MOU clarifies the requirements for PA funding for: emergency flood fighting and response, emergency repair, permanent restoration, and replacement of facilities.

The FEMA/Cal EMA MOU clearly defines the respective responsibilities of FEMA, Cal EMA, and the reclamation districts before, during and after the event. It requires levees and flood control mechanisms to meet specific geometric and physical criteria such as height, width, angle of slope, and armament. It also requires regular inspections of levees as well as documented profiles, cross sections, and certifications from licensed engineers that the facilities satisfy criteria established in the MOU. Each reclamation special district must submit an annual maintenance plan that addresses any and all deficiencies identified by the certifying engineer.

**Conclusion**

FEMA's preparedness efforts in the Sacramento-San Joaquin Delta area are exemplified by the water-focused joint planning and exercises that occur there regularly. By engaging the Whole Community in catastrophic, all-hazards, and hazard-specific planning, and in the exercises that test and evaluate these plans, we continue to address the long term water-related issues in California. Our plans address a wide variety of potential hazards and unite emergency managers through an intensive and collaborative planning process, while our exercises bring together thousands of emergency responders across the Nation to practice and assess current plans and procedures. The Agency continues to create cooperative policies that assure adequate, safe, and dependable water supplies for California and the Nation at-large.

Thank you, Mr. Chairman, for providing me this opportunity to appear before you today. I look forward to answering any questions you or other Members of the Committee may have.



**BRENDAN A. MURPHY**  
**Assistant Secretary**  
**California Emergency Management Agency**

**U.S House of Representatives**  
**Subcommittee on Economic Development, Public Buildings and Emergency**  
**Management**

**Hearing:**  
**“California’s Sacramento-San Joaquin Delta: Planning and Preparing for**  
**Hazards and Disasters”**

**Thursday, August 16, 2012**

Chairman Denham, Ranking Member Norton, and members of the Subcommittee, thank you for allowing me the opportunity to provide testimony today regarding the Sacramento-San Joaquin Delta and to brief you on the preparedness efforts that have been, and continue to be, accomplished to prepare for when disaster strikes.

First, however, I would like to acknowledge the Chairman’s commitment towards enhancing preparedness efforts at all levels of government. Your leadership has greatly impacted efforts to ensure our communities are better prepared to endure multi-hazard disasters.

The California Emergency Management Agency (Cal EMA) is responsible for coordinating the State’s overall preparedness efforts and enhancing our capabilities for both intentional and natural disasters. Cal EMA coordinates homeland security and emergency response under the mission of saving lives and reducing property loss during times of disaster and works to expedite recovery from the effects of disasters.

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In coordination with the National Preparedness Goal, California's overall preparedness system is comprised of five Mission Areas: prevention, protection, mitigation, response and recovery. In all of these mission areas, Cal EMA strives to build a streamlined system that will reduce the impacts of both natural and intentional disasters. We have learned significant and valuable lessons from the disasters we have faced and we use those lessons to direct our current actions and establish best practices.

One of the significant lessons we have learned is that we must focus our investments on disaster preparedness efforts so that we can mitigate the devastation of human suffering and financial loss in the future. We have learned that we must invest financial resources on the front end to ensure that our infrastructure is secure, that early warning systems are in place, and that the public is well informed about potential risk and have the tools they need to prepare themselves and their families for when disaster strikes. As you are well aware, California is faced with a daunting list of disaster risks. Much like the likelihood of a catastrophic earthquake, the daunting threat and risk of a catastrophic flood incident within the California Delta is very real. As our scientists warn, it is not a matter of *if* it will occur, but rather, *when* it will occur.

*Sacramento-San Joaquin Delta Emergency Response Efforts*

The Sacramento-San Joaquin Delta Emergency Preparedness Act of 2008 required the Cal EMA to establish the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force. The Task Force was comprised of Cal EMA, the Delta Protection Commission, the Department of Water Resources and the five counties within the Delta region: Contra Costa, Sacramento, San Joaquin, Solano and Yolo.

The mission of the task force was to develop recommendations to improve the quality and effectiveness of an all-hazard emergency response in the Delta region, while maintaining a level of readiness consistent with identified threats and current capabilities. As a result of the recommendations and efforts of the task force, we have worked with our partner agencies to make significant strides towards these efforts.

*Delta Multi-Agency Coordination System:* We adopted and implemented a Delta Multi-Agency Coordination System (MACS), which was successfully exercised during the 2011 Golden Guardian Full Scale Exercise, to test the State's ability to allocate scarce resources throughout the Delta region during a catastrophic flood. The exercise focused on preparing for, responding to and recovering from a catastrophic flood in the Northern Region and included more than 5,000 local,

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regional, state and federal responders, as well as state agencies and nonprofit emergency response and private industry partners who participated in various events throughout the three day exercise. The Delta MACS document is in the process of being integrated into statewide procedures to ensure maximum efficiency and standardization for emergency response with our key partners, including local stakeholders, the California National Guard and the California Department of Water Resources.

*Regional Mass Evacuation Plan:* Cal EMA held a regional mass evacuation tabletop exercise on January 11, 2012, to provide participants an opportunity to evaluate their current response concepts, plans, policies, procedures, and capabilities for notification, evacuation, and mass care and sheltering in response to a flood based scenario. This exercise was a regional collaboration between Cal EMA and its local and state partners and will serve towards the development of a regional mass evacuation plan.

*Delta Region Specific Interoperability Communications Plan:* The California Delta Region Interoperable Communications Plan was updated in February 2011 and documents the interoperable communications resources available within the designated area. The plan also includes specifics such as who controls each resource along with the rules of use and/or operational procedures for the activation and deactivation of each resource.

*Flood and Evacuation Contingency Mapping:* Cal EMA, in direct partnership with the Department of Water Resources and other state and local stakeholders, participated in a project led by the U.S. Army Corps of Engineers, which identified resources and facilities in the Delta, or those that could be easily deployed to the Delta, for any emergency response operation during a flood event. As part of this effort, existing shelter and evacuation plans were reviewed to recognize resources and opportunities available for response and identify weaknesses and needs. A series of flood contingency maps were prepared to highlight the identified resources and outline general emergency response procedures.

*Sacramento-San Joaquin Delta Catastrophic Flood Incident Plan-* Cal EMA is currently initiating the development of a Northern California Catastrophic Flood Response Plan based on the objectives recommended in the task force's report. A contract was awarded less than a month ago using Homeland Security Grant Funds allocated to Cal EMA. The United States Geological Survey's (USGS) ARKstorm scenario will be used to drive the plan development. We are working with the



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USGS to modify its scenario to also recognize 100 and 200 year flood events in the Central Valley, before reaching the 1,000 year flood event as described in ARKstorm. This modification will allow us to build upon existing government and water agency plans already in place.

We all know that the work we do is faced with uncertainties and we must continue to work together to ensure that our resources are put to the best use possible. California continues to be recognized as a national leader in homeland security and emergency management efforts, and with your support we will continue to work tirelessly to advance efforts which we believe will provide the greatest benefits for our state and nation.



Ronald E. Baldwin, Peterson-Brustad, Inc.  
San Joaquin County Director of Emergency Operations (Retired)

Improving Disaster Response in the Sacramento-San Joaquin Delta

In the debate on the future of the Sacramento-San Joaquin Delta there seems to be general agreement on at least one thing; the Delta, as a distinct geographical region, is very important to California. Given this agreement, we need to move past the mere description of current emergency management systems and the superficial recommendations that have characterized discussion on Delta emergency response to date. We need to come to grips with the real response gaps that still exist despite past advances in emergency response process.

In light of this need, the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force report is important because it does bring to light some very real response gaps that are not going to be fixed by just having another exercise. This was achieved because it is the only report on the subject prepared by individuals actually responsible for managing Delta flood response. Sometimes it takes experience, and the weight of actual responsibility, to get past descriptions of how things are supposed to work to how they really work in real life.

The Task Force report is also important because with its release we now have one of the two key ingredients for progress in any area of endeavor; a credible, coherent and comprehensive strategy for action. Fortunately, the second critical ingredient for progress is also appearing; the resources to implement the strategy. Besides its own internal planning, the Department of Water Resources (DWR) has announced the imminent release of the first ever grants to local jurisdictions for flood response projects from the bonds passed in 2006. The Central Valley Flood Protection Plan (CVFPP) program has simultaneously announced that additional funds will be funneled to regional planning bodies for use, in part, on flood preparedness projects. Finally, the California Emergency Management Agency (CalEMA) has announced the allocation of funds for the preparation of a Northern California Catastrophic Flood Incident Plan over the next year.

So the ingredients for true progress in Delta flood response are present. But if this historic opportunity is to be effectively exploited policy makers must ask some vital questions. Have all levels of government committed to using the Task Force strategy to guide their separate preparedness efforts? Or is everyone, instead, just going to go their own way in their own "silo" under their own priorities and strategies? Will these separate funding streams be coordinated to ensure an integrated and efficient effort to implement the joint strategy? Or will these separate programs move along more or less independently, leading to potential duplication of effort, conflicting results, or incomplete implementation? The answers are not yet clear to me.

As far as the specific Task Force recommendations, it is important to keep in mind that there are two key separate components to a flood response. There are the functions that most people

equate with the term “emergency response”; evacuation, rescue, shelter, public assistance etc. And there is the “flood fight”, consisting of those efforts to prevent levee failure during the flood and to reduce the extent and duration of impounded flood waters if a levee does fail.

It is important to make this distinction for two reasons. First, each component involves completely different players and completely different response issues. Second, the flood fight component is really the priority focus in a flood because if we are as efficient and effective as possible in preventing levee failure, and as efficient and effective as possible in limiting the extent, depth, or duration of flood waters if a levee does fail, then we prevent or physically limit the subsequent tragedy. An effective flood fight also makes the other response functions easier to perform and maybe unnecessary. The report recommendations address one or the other of these key response components and should be analyzed in that light.

Finally, I have a brief comment on three of the report recommendations that bear on those flood fight operations. The Task Force report calls for the creation of a Delta multi-agency coordination system (MACS). Common sense tells us that floods occur within distinct physical and hydrological regions. Within those regions, such as the Delta, residents struggle with the same threat, need the same resources, and are dependent upon each other for ultimate success. Yet, the current emergency management system divides the Delta into five operational areas, two mutual aid regions, numerous local jurisdictions, and several state and federal agency jurisdictions. The call for a Delta MACS is a first attempt to create a more regionally integrated response to what are regional disasters within a distinct geographical area that has just refused to conform to political and administrative boundaries.

The Task Force report calls for flood contingency mapping in the Delta. It only took one flood for me to realize that we were making flood fight decisions and collecting vital information in the middle of the crisis that could have been made and collected when the rivers were quiet. I also saw that the information that we did have was not in a format amenable for use in the environment in which critical decisions were being made. San Joaquin County pioneered the development of flood contingency maps to address these issues. Examples can be seen at [www.sjmap.org/oesfcm](http://www.sjmap.org/oesfcm). The Task Force recognized the need to fill this gap for the entire Delta. FEMA Region IX Mitigation Branch also recognized the importance of this step in 2009 and funded the preparation of a guide outlining best practices for accomplishing it.

The Task Force report calls for creation of a flood fight emergency response funding mechanism. We currently have an upside down funding system for responding to levee problems or failures. The jurisdictions best placed to respond to problems, the reclamation districts, often do not have adequate cash flow when the crisis arrives and the agencies that potentially have the funds to respond can be slower to respond for bureaucratic and other reasons. I have personally witnessed numerous cases where there were 24-48 hour delays in responding to an identified levee problem as agencies struggled with the issue of who was able or willing to act, and when. Fixing this issue, in my opinion, is of the highest priority.

I appreciate the opportunity to provide testimony on this subject important to the residents of the Sacramento-San Joaquin Delta, whose lives and livelihood are at stake, and to all of California. I am willing to further elaborate on my comments as the committee may desire.

PETERSON . BRUSTAD . INC .

**Testimony of Commissioner Timothy Alan Simon  
California Public Utilities Commission**

U.S. House of Representatives Committee on Transportation and Infrastructure  
Subcommittee on Economic Development, Public Buildings and Emergency Management  
*California's Sacramento-San Joaquin Delta: Planning and Preparing for Hazards and Disasters*  
August 16, 2012, Stockton, California

Good morning Chairman Denham and distinguished Members of the Subcommittee. Welcome to California and the great city of Stockton, one of our jewels in the crown of the Delta. Thank you for your work to protect the California Delta, a unique ecological treasure and precious agricultural asset. The California Public Utilities Commission, or CPUC, is responsible for the safety and security of critical utility infrastructure—for water, natural gas, electricity, communications, rail, and other common carriers—within the Delta and throughout the state.

The CPUC regulates more than 400 investor-owned water utilities and has worked closely with the California Foundation on the Environment and the Economy and the Delta Vision Foundation on Delta water policy, because of the Delta's impact on water supply.<sup>1</sup> To the extent that Governor Brown's revisions to the Bay Delta Conservation Plan<sup>2</sup> affect water utilities, this Commission is involved.

Critical Utility Infrastructure in the Delta

*Pipeline Safety.* The CPUC's authority over investor-owned utility infrastructure in the Delta includes the pipelines carrying natural gas. Gas pipelines serve both core needs, for residential and small commercial customers, and electricity generation needs. It should be noted that, as Chair of the Committee on Gas for the National Association of Regulatory Utility Commissioners and a member of the Pipeline Safety Task Force for the U. S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration, I have a particular concern for pipeline safety.

The Delta levees protect natural gas production and pipeline facilities throughout the Delta. Many gas and oil production wells are located here, and the electric utility, Pacific Gas and Electric, or PG&E, has transmission pipelines running throughout the Delta to transport gas from northern California and from out-of-state gas producers. PG&E also has pipelines that interconnect its own system, diverting gas to and from the underground storage facilities located on islands in the Delta.

Although some facilities are designed to withstand various levels of irrigation and flooding for local agricultural needs, the gas production and transportation infrastructure could be damaged if it is not designed for floodwater levels from levee breaks. Generally, a high pressure pipeline is not affected by the presence of some water near the line, but unanticipated flooding that would otherwise be averted by the levees could cause soil erosion under the pipelines. Excess water around the pipeline could also increase the buoyancy of some pipelines. These conditions, along with significant increases in water levels above the pipeline, could create stresses on the pipelines which may not have been factored into original designs.

<sup>1</sup> The CPUC sets forth its policy objectives for the regulation of investor-owned water utilities in the *California Public Utilities Commission 2010 Water Action Plan*.

<sup>2</sup> California Natural Resources Agency News Release, July 25, 2012.

The Delta levees also provide the roads for gas and oil producers and PG&E to access facilities, including PG&E's McDonald Island gas storage field, and to transport materials for normal operations. They could perform these functions in other ways after unanticipated flooding, but that would be more complicated and more costly.

In response to the horrific pipeline rupture and explosion in San Bruno, California, in Fall 2010, the CPUC opened a proceeding to establish a new model of natural gas pipeline safety regulation,<sup>3</sup> including, among other things, requirements for construction, especially shut-off valves, maintenance, inspections, operation, record retention, ratemaking, and penalties, and to expand our emergency and disaster planning coordination with local officials. The CPUC also increased the scope of PG&E's gas transmission and storage rate case to include a safety phase focusing on PG&E's disaster and emergency plans, shut-off valve testing and monitoring, changes to capital project priorities, safety related protocols or procedures, and relationships with first responders.

*Joint Pole Safety.* The CPUC has moved to insure proper maintenance of electric and telephone utility poles, so that they are strong enough to withstand high winds, flooding, and other disasters. In the CPUC's Joint Pole Safety rulemaking,<sup>4</sup> for which I am the Assigned Commissioner, this Commission adopted pole loading rules and will address pole structural strength in the next phase of the rulemaking.

Last November, powerful winds swept through the San Gabriel Valley in southern California, knocking down utility facilities, uprooting trees, and causing prolonged power outages. Approximately 200 wood poles were downed. Earlier this year, the CPUC issued an Order Instituting Investigation to determine, among other things, whether the jointly-owned electric and telephone utility poles were overloaded and what additional safety measures are needed. Hurricane Katrina in 2005 caused unprecedented damage to electric utility distribution and transmission systems. While pole safety efforts have thus far focused on wind and fire, clearly the strength of poles in the event of flooding is also relevant.

*Smart Grid.* The large, investor-owned electric and gas utilities have submitted smart grid deployment plans to the CPUC in the ongoing Smart Grid proceeding.<sup>5</sup> Smarting the electric and gas systems, as well as water systems, will not only alert the utilities to service interruptions, but also allow them to dispatch or curtail resources in emergencies.

*Backup Power for Communications Infrastructure.* The southern California wildfires of 2003 and 2007 demonstrated how the communications infrastructure we all rely on plays a vital role in public safety. The primary wireline provider, AT&T, reported after the 2007 fires that 1.5 million feet of copper wire and 500,000 feet of fiber optic cable were destroyed, and 2000 utility

<sup>3</sup> California Public Utilities Commission, *Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms*, filed February 24, 2011, Rulemaking 11-02-019.

<sup>4</sup> California Public Utilities Commission, *Order Instituting Rulemaking to Revise and Clarify Commission Regulations Relating to the Safety of Electric and Communications Infrastructure Provider Facilities*, Rulemaking 08-11-005, filed November 6, 2008.

<sup>5</sup> California Public Utilities Commission, *Order Instituting Rulemaking to Consider Smart Grid Technologies Pursuant to Federal Legislation and on the Commission's own Motion to Actively Guide Policy in California's Development of a Smart Grid System*, Rulemaking 08-12-009, filed December 18, 2008.

poles were downed. Even underground phone cable systems were affected, with telephone wire cabinets destroyed or phone wires fused into a mass of copper and plastic. The operations of more than 50 cell sites were impacted.

In 2006, the California Legislature adopted AB 2393,<sup>6</sup> and Congress passed the Warning, Alert and Response Network (WARN) Act,<sup>7</sup> addressing backup power needs in catastrophes. These measures were inspired in large part by Hurricane Katrina, which devastated New Orleans when water broke through two levees and virtually submerged the city, washing out bridges, converting highways into canals, and rendering power and communications lines inoperable. This exacerbated the disaster when many of those infrastructure arteries were strained, and in some cases inoperative, resulting not only in communications failures but also in the failure of water pumping and firefighting equipment.

AB 2393 directed the CPUC to investigate how to insure the reliability of backup power for telephone service, both in the network and in the home, in the event of such disasters. Unlike copper telephone wires, fiber optic cable, coaxial cable, and other facilities do not provide power to the customer's telephone. In the Backup Power proceeding,<sup>8</sup> for which I was the Assigned Commissioner, the CPUC adopted customer education guidelines on the backup power needs and limitations of facilities-based residential telephone services, as well as service provider responsibilities in power outages.

When we here in California are experiencing extended fire seasons and the ever-looming threat of earthquakes, protecting the infrastructure so vital to human health and safety—including but not limited to the communications infrastructure—continues to be the CPUC's highest priority. In my professional opinion, customer education is a critical component of public safety.

#### Public Safety Communications in the Delta

In addition to the CPUC's responsibility for the safety and security of critical utility infrastructure, this Commission has an essential role in emergency preparedness and response. The Commission regulates telephone service and, along with its sister federal agencies, public safety communications. Although primary responsibility for responding to emergencies rests with the California Emergency Management Agency and local first responders, the CPUC has an important role in ensuring that the communications infrastructure performs in emergencies. The CPUC is uniquely positioned to insure, through our review of utility operations and investment decisions, the availability of communications systems in ways that promote public safety. The Gas Storage proceeding,<sup>9</sup> for which I was the Assigned Commissioner, was the first to establish protocols for coordinating with first responders during emergencies involving gas storage and transmission facilities.

<sup>6</sup> California Assembly Bill 2393 (Levine): Ch. 776, Stats 2006.

<sup>7</sup> P.L. 109-347, Title VI.

<sup>8</sup> California Public Utilities Commission, *Rulemaking on the Commission's Own Motion into Reliability Standards for Telecommunications Emergency Backup Power Systems and Emergency Notification Systems Pursuant to Assembly Bill 2393*, Rulemaking 07-04-015, filed April 12, 2007.

<sup>9</sup> California Public Utilities Commission, *Application of Pacific Gas and Electric Company Proposing Cost of Service and Rates for Gas Transmission and Storage Services for the Period 2011-2014*, Application 09-09-013, filed September 18, 2009.

*Lifeline Program.* To insure that our citizens have access to effective public safety communications, the CPUC is first and foremost pushing forward to get more people connected to advanced communications services. This Commission brings broadband infrastructure to remote areas through the California High Cost Fund and the California Advanced Services Fund. The CPUC has opened the Lifeline telephone discount program to wireless, in order to bring mobile communications to more low-income citizens, who rely more heavily on wireless technology. Communications programs should be technology-neutral and, in particular, clearly include the mobile technologies so necessary for communicating with emergency personnel and families in the chaos and confusion of natural disasters.

*211 Service.* Last September the CPUC extended the 211 emergency information program to the 28 counties who did not have their own 211 call centers, including San Joaquin and Yolo counties.<sup>10</sup> Residents may now receive assistance from the nearest 211 call center in a neighboring county. Residents of these previously unserved counties, who may be cut off from their own phones and computers after a major levee break, will now have access to up-to-the-minute information very specific to their situation by talking with a live person—information on shelters, food distribution, road closures, utilities outages, contacting family members, medical assistance, and so on. By providing this important information via 211, calls that might otherwise go to 911 will instead go to 211, leaving 911 call centers available to provide access to police, medical, and fire service to those in life-and-death situations.

*Multi-Line Telephone System (MLTS) Rules.* The CPUC's Multi-Line Telephone System 911 rulemaking,<sup>11</sup> for which I am the Assigned Commissioner, revealed a serious public safety gap in California's emergency communications system that occurs when caller location information from a multi-line system is displayed incorrectly to public safety answering point (PSAP) operators. The lack of accurate location information results in limited public safety resources being directed to the wrong location, and can be life-threatening if the caller cannot supply the correct location. PSAP's presented examples of problems with emergency calls originating from PBXs at large hospitals, public schools, large businesses, local government installations, and assisted living facilities, in all regions of California, where they could not locate the 911 caller within those campuses. The proceeding addresses customer education and the responsibilities of telephone companies in this area.

#### CPUC Jurisdiction over Communications Infrastructure for Public Safety Purposes

Internet protocol-, or IP-, enabled communications allow citizens to send text, graphics, photos, or video to public safety answering points (although many public safety agencies are not yet equipped to receive them). They also allow the authorities to notify the public through phone calls, text messages, or emails to mobile devices. We can use mobile technology to target those heading toward a disaster and direct them out of danger. At a campus, workplace, or event, we can direct them to a safe setting.

<sup>10</sup> California Public Utilities Commission, *Order Instituting Rulemaking Regarding Whether to Allow Access to 211 Services in Counties and Localities Without 211 Centers*, Rulemaking 10-06-002, filed June 3, 2010.

<sup>11</sup> California Public Utilities Commission, *Order Instituting Rulemaking to Improve Public Safety by Determining Methods for Implementing Enhanced 911 Services for Business Customers and for Multi-line Telephone System Users*, Rulemaking 10-04-011, filed April 8, 2010.

California lives with mythical-scale floods, fires, windstorms, and earthquakes. The CPUC needs the ability to protect and insure the functioning of our communications infrastructure in those disasters. One of the pillars of the CPUC's fundamental regulatory responsibility is to enforce core safety guidelines. This role is clearly within the authority of this Commission and rooted in the historic police powers of the state.

Some may believe that the move to all-IP communications systems may jeopardize the authority of state utility commissions in this area, and I urge the Congress to take a close look at this issue. States retain jurisdiction over the health, safety, and welfare of their citizenry, and it is the position of my office that the CPUC has now and will continue to have jurisdiction over communications infrastructure for public safety purposes.

Thank you for inviting me to speak to you today.



**Written Statement of**  
**Mr. Alexander R. Coate**  
**General Manager**  
**East Bay Municipal Utility District (CA)**



**“California’s Sacramento-San Joaquin Delta: Planning and Preparing  
for Hazards and Disasters”**

**Before the**  
**House Committee on Transportation and Infrastructure, Subcommittee**  
**of Economic Development, Public Buildings, and Emergency**  
**Management**  
**U.S. House of Representatives**  
**Congressional Hearing - Stockton, California**  
**August 16, 2012**

August 16, 2012 Testimony

Mr. Alexander R. Coate, General Manager of the East Bay Municipal Utility District

**“California’s Sacramento-San Joaquin Delta: Planning and Preparing for Hazards & Disasters”  
U.S. House of Representatives Committee on Transportation and Infrastructure  
Subcommittee on Economic Development, Public Buildings and Emergency Management**

INTRODUCTION

Chairman Denham and members of the Subcommittee, I am Alexander Coate, General Manager for the East Bay Municipal Utility District (EBMUD). I am pleased to appear before the Subcommittee today on behalf of EBMUD. We are grateful for the opportunity to testify on the important issue of how federal policies are vital to comprehensive planning for, and responding to, disasters in the Delta.

As an agency with significant infrastructure at risk within this region, we have learned some important lessons on emergency preparedness and we believe these lessons can help inform future discussions.

I would like to start by providing some background. EBMUD is a regional water and wastewater agency located in the East San Francisco Bay Area. We provide drinking water to 1.3 million residents in a service area that encompasses 20 cities and 15 unincorporated communities in Alameda and Contra Costa Counties. We also provide wastewater treatment services to 650,000 residents in a portion of our drinking water service area.

Over 90% of our drinking water comes from the Sierra foothills, about 90 miles east of our service area. We own and operate the Mokelumne Aqueducts. This system conveys the primary water supply from EBMUD’s Pardee Reservoir, located in Calaveras and Amador Counties, across the Sacramento-San Joaquin Delta and ultimately into Contra Costa and Alameda Counties. These aqueducts are also used to carry supplemental supplies from the Freeport Regional Water Project to EBMUD’s service area in times of drought. EBMUD built and operates the Freeport Project in partnership with the County of Sacramento. During these extremely austere budget times, I am particularly proud that this project was constructed using local revenues and is a symbol of what can be achieved through collaboration among stakeholders.

THE MOKELUMNE AQUEDUCTS

The Mokelumne Aqueducts are the lifeline of our communities’ economies and public health. The aqueducts are a vital piece of infrastructure that must be addressed in any state and national effort to protect the Delta. EBMUD has interconnections with the San Francisco Public Utilities Commission, the Contra Costa Water District, and the Dublin San Ramon Services District, making the aqueducts a linchpin in an increasingly integrated regional water system.

The interconnections offer us the flexibility to maximize the various elements of our region’s infrastructure in the event of an emergency. Fortunately we have not had to employ this strategy but if required we are prepared to provide water to nearly 6 million people and area businesses. These aqueducts are critical infrastructure that provide a substantial regional public benefit that extends far beyond EBMUD’s service area and its ratepayers.

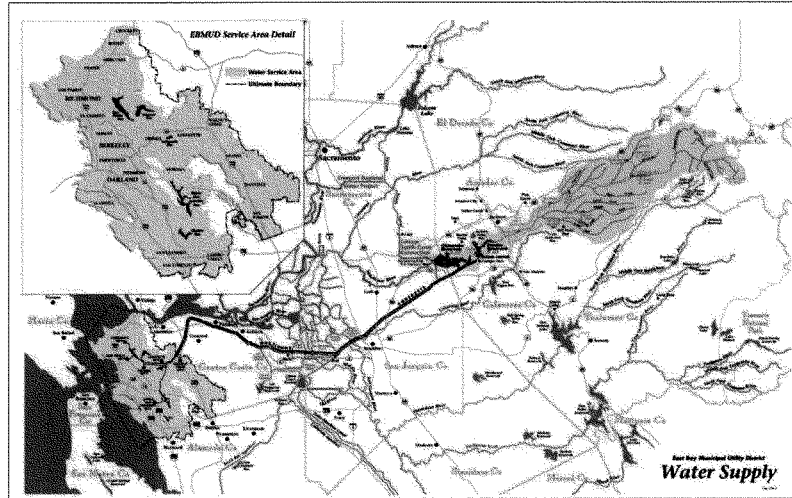


FIGURE 1 – EBMUD's WATER SUPPLY SYSTEM

The Mokelumne Aqueducts were constructed in the 1920s, 1940s, and 1960s and consist of three steel pipes ranging in diameter from 65 to 87-inches. They cross over five Delta islands for about a 15-mile stretch in the central Delta. All of these Delta islands are below sea level – some as much as 15-20 feet - and are protected by earthen levees that must continuously hold back the Delta waters. EBMUD shares with operators of other infrastructure, including the users of the state and federal water projects, a heavy reliance on the integrity of the existing levee system to maintain water deliveries and other critical services. The replacement cost of the aqueducts is currently estimated to be \$1.7 billion.

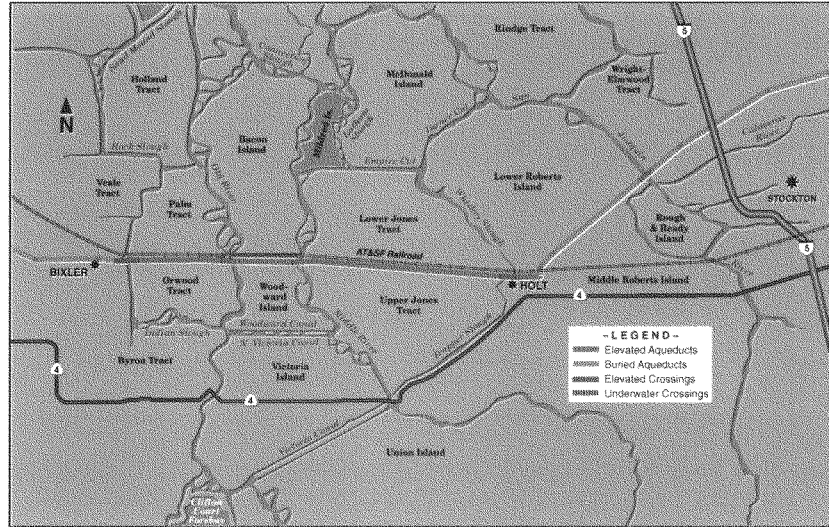


FIGURE 2 – EBMUD'S MOKELUMNE AQUEDUCTS CROSSING THE DELTA

EBMUD's aqueducts are protected by 51 miles of levees that surround five Delta Islands. These levees are relied upon by multiple other beneficiaries, including: state and federal export pumps; Contra Costa Water District intakes; State Highway 4; Kinder Morgan petroleum pipeline; PG&E pipelines; Burlington Northern Santa Fe (BNSF) Railway line; agricultural lands; and recreational users.

#### LEVEE FAILURE

We have first-hand knowledge of dealing with an emergency in the Delta. The levees protecting the Mokelumne aqueducts have failed three times – in 1980, in 1986, and most recently in 2004. Each time the levees failed, our aqueducts were at risk of significant damage that could have resulted in an interruption of the water to the East Bay. These aqueducts were not designed to function submerged or to withstand tidal action and floating debris. Any breach of the aqueducts would leave the East Bay region with at most six months of water supply assuming severe rationing. This rationing would result in serious negative economic impacts throughout the region.

Failure of one of the levees surrounding EBMUD's aqueducts, and the resulting flooding of one of the islands, would in turn stress adjacent islands, and could result in progressive failures of surrounding levees. This would threaten critical facilities in the area, including the Mokelumne aqueducts, Kinder Morgan petroleum pipeline, BNSF rail line, and State Highway 4. Any damage to the levees may also result in adverse impacts to the Old and Middle Rivers that route water to the State Water Project at the Clifton Court Forebay. It would also potentially affect the ecosystems in the Delta, degrading water quality and compromising the water supply to over twenty million people and hundreds of farms south of the Delta who rely on this water supply. The statewide financial impact of this would be huge.

The reality of this threat became apparent again several years ago. On a perfectly beautiful day on June 3, 2004, the Upper Jones Tract levee along Middle River unexpectedly, and without any prior indication, failed. The failure took place during late spring without either a flood or an earthquake as a precipitating event. This levee is one of many in the Delta that holds back water every day from the adjoining below-sea-level farmland and protects important infrastructure.

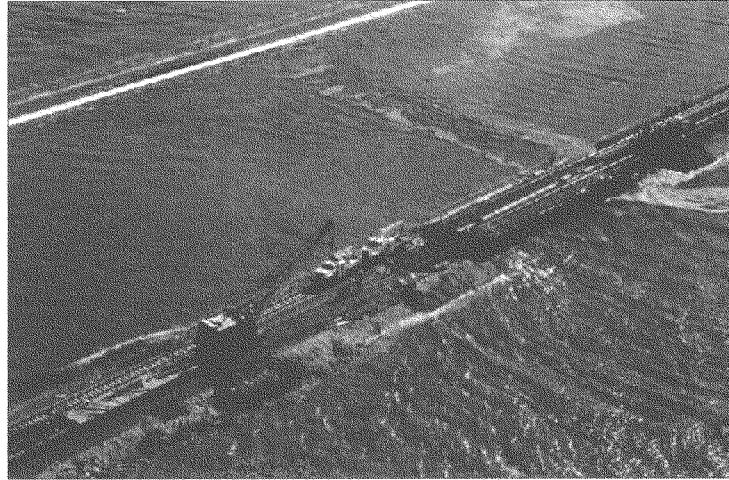
In the weeks and months that followed, local, state, and federal agencies carried out extensive and complex flood-fighting operations to prevent the failure from cascading to other Delta islands. Extensive efforts were made to close the breach in the levee, pump out the flood waters, and reduce seepage through the breach closure. A 2008 report by the Public Policy Institute of California<sup>1</sup> estimates the cost for the flood fight, levee repair, and island pumping at \$30 million with an additional \$60 million in damages for a total estimated cost of \$90 million for this single levee failure.

EBMUD's aqueducts, the lifeline of our water supply system, were threatened to within feet when massive debris surged toward our aqueducts. Fortunately our aqueducts continued to operate though it cost \$10 million to recoat them once the flood waters were pumped out. If the response actions had been unsuccessful in preventing contact with the aqueducts, a most certain rupture would have occurred, taking with it the main source of water for our region and resulting in significant public health and economic impacts.



*FIGURE 3 – INUNDATED AQUEDUCTS WITH FLOATING RAIL CAR VISIBLE (1980)*

<sup>1</sup> Public Policy Institute "Levee Decisions and Sustainability for the Delta, Technical Appendix B," Comparing Futures for the Sacramento-San Joaquin Delta, 2008



**FIGURE 4 –INUNDATED AQUEDUCTS WITH RECOVERY WORK IN PROGRESS (2004)**

#### LESSONS LEARNED

I highlight this event because it provides a case history of the real consequences that can result from indecision and inadequate policy and collaboration among all levels of government.

The key lesson that we learned is the importance of having an emergency action plan that includes a commitment by the various agencies with resources and funding to respond in a coordinated manner. In this case, first responders like EBMUD quickly depleted available resources and were forced to stand by until additional resources were made available. Response times were delayed because field staff were not empowered to act.

It is our experience that the lowest level of command is the staff on the scene. Due to their proximity to the emergency these are the people who have the best information, are able to assess the situation quickly, and act decisively and with appropriate actions. However, in past emergencies, staff has not had the authority to respond. The absence of advance funding posed a secondary and serious challenge to mitigating threats. As a result, response was delayed due to the need for field staff to transfer information to the decision-makers at higher levels of command and wait for authorization to act. This “decision bottleneck” created unnecessary delays that further exacerbated the damage and extended the repair time.

An effective response plan should commit state and federal agencies to respond, clearly define roles and responsibilities, and provide the needed advance funding. Because the consequences of delaying action after a levee break can be catastrophic, the extent of the federal and state commitment to respond and repair a levee breach should be known and communicated in advance as part of basic emergency preparedness so that local agency staff is empowered to respond. The development of a

coordinated response plan that clearly describes the roles and expectations of the state and federal governments to respond to a levee failure means delays will be minimized and the economic consequences from such events could be greatly reduced.

#### EBMUD'S INVESTMENTS IN PREPAREDNESS

We know from experience that the threat of future failures in the Delta is real. In addition to the three failures of levees that protect our aqueducts, levees in the Delta have been breached approximately 160 times over the last century. The threat of more levee failures, potentially on a system-wide scale similar to the Katrina-New Orleans event, is increasing over time due to island subsidence, sea level rise, intensified flood events, and seismic faults in and near the Delta. Scientists estimate a two-in-three chance of a major quake in the Delta during the next 50 years, potentially leading to permanent changes in the landscape of the Delta.

However, the story does not stop at the Delta. Our emergency planning must not only protect infrastructure, it must also ensure the continued integrity, resiliency, and reliability of our water supply system. EBMUD has invested tens of millions of dollars to protect our aqueducts in the Delta. We have also spent many years and made a tremendous investment in developing and implementing programs to diversify and bolster our water supply and improve the resiliency of our infrastructure system-wide. Here are a few examples:

##### Levee improvements

EBMUD is the only entity located outside of the Delta that provides significant annual contributions for the improvement of Delta levees. Since the early 1980's, EBMUD has voluntarily contributed a total of almost \$15 million towards levee repairs and improvements on the five Delta islands that protect the Mokelumne Aqueducts. Levee improvements have included raising the crest to at least one foot above the 100-year flood level, widening the crest, reducing levee slopes, and adding riprap for wave protection. However, these levees continue to settle and subside, and have failed three times over the past sixty years. Levee improvements are necessary to protect the region's agricultural, cultural, and historical resources, as well as protect the water supply to over twenty million people.

We recently supported the reclamation districts that maintain the 51 miles of levees that protect our aqueduct. We worked with the State of California to allocate \$33.5 million in state funding to make improvements to more than 40 miles of levees. EBMUD and the reclamation districts entered an agreement so the reclamation districts could accept the Department of Water Resources (DWR) funding and implement the projects. EBMUD agreed to pay the 15 percent local share which totals \$6 million.

##### Seismic retrofit of aqueducts

EBMUD has invested \$40 million in ratepayer funds to retrofit its aqueducts to improve their ability to withstand a maximum credible seismic event.

##### Aqueduct interties

At a cost of \$14 million, EBMUD is constructing interconnections to our three Mokelumne Aqueducts on each side of the Delta. This will allow EBMUD to restore 77 percent of the raw water system capacity with only one pipe in operation across the Delta. EBMUD has six months of storage locally to serve its customers during an outage of the raw water system resulting from a failure in the Delta. This will bolster the resilience of our water supply system by enabling a rapid return to service after a failure with sufficient capacity to meet customer needs and begin to recover local storage. This will

greatly lessen the consequence of a failure and could prevent what could otherwise be much more severe and economically damaging rationing.

#### Interconnections with other water systems

EBMUD has interconnections with the San Francisco Public Utilities Commission, the Contra Costa Water District, and the Dublin San Ramon Services District making the aqueducts a linchpin in an increasingly integrated regional water system. These interconnections increase the reliability of the water supply for EBMUD as well as other agencies in the region and allows for optimizing existing supplies. We are also exploring adding additional interconnections to our system to further enhance the water supply reliability for EBMUD's ratepayers the entire region.

#### Standby materials

A levee failure requires significant materials be available for the repair work to recover the aqueducts. EBMUD is planning for the placement of standby materials and supplies in key locations to facilitate emergency response. We estimate that stockpiling material to repair levees and to access the aqueducts, and purchasing the pipe for repair/replacement of failed aqueducts, would cost about \$10 million.

#### Water supply diversification

EBMUD currently provides over 9 million gallons of recycled water per day to its customers for irrigation, commercial and industrial uses through its Integrated Recycled Water Management Program, the San Ramon Valley Recycled Water Project, the North Richmond Water Reclamation Plant, and various smaller projects. EBMUD has plans to increase recycled water use by an additional 11 million gallons per day by 2040<sup>2</sup>.

EBMUD began its water conservation program in the 1970s and was one of the first agencies to prepare and implement a water conservation master plan in 1994. Since 1994, the water conserved by EBMUD customers has increased by an estimated 26 million gallons of water per day with plans to increase this by an additional 36 million gallons per day by 2040<sup>3</sup>.

EBMUD is also pursuing additional supplies via conjunctive use and desalination projects that are currently in various phases of planning and development.

#### Collaborative efforts

As I mentioned earlier, EBMUD worked collaboratively with five local reclamation districts to obtain \$33.5 million in state funds for levee strengthening and provided the \$6 million local cost share. These projects required collaboration with the Department of Water Resources, the Department of Fish and Game, the Delta Stewardship Council, and other resource agencies to secure the funding needed for levee projects to protect critical infrastructure and ecosystems in the Delta.

In a separate effort, EBMUD and six other water agencies are working together to identify those levee projects that are of high priority for enhancing the water supply reliability for the Bay Area and Southern California. This coalition has approached the state for assistance in identifying a source to fund the \$163 million needed to complete the projects that have been identified. Our collaborative efforts continue.

<sup>2</sup> East Bay Municipal Utility District, "Water Supply Management Program," Final, April 2012

<sup>3</sup> East Bay Municipal Utility District, "Water Conservation Master Plan Update," 2011.



#### MITIGATING THE EFFECTS OF FUTURE DISASTERS

EBMUD has invested a tremendous amount of money and resources into emergency preparedness. The benefit of our investment extends far beyond our ratepayers. It extends to those agencies with which we have cross-connections, to those with infrastructure in the Delta, as well as to the state and federal government who have water supply and other infrastructure in the Delta.

Despite the tremendous amount of work that we and our sister agencies have done to prepare for emergencies, much more could be done if additional resources were available. Emergency preparedness requires a significant commitment of capital. This commitment competes against the funding needed to maintain our system under normal operating conditions. However, I would emphasize that these costs pale in comparison to resource demand to respond and recover after a disaster. The ability to direct federal assistance to “disaster-proof” our systems through the diversification of supplies and improvements to infrastructure can reduce short, medium, and long-term costs responding to and recovering from an actual crisis, and can avert the collateral economic devastation that is inevitable following a disaster.

We hope that when your committee renews the Water Resources Development Act (WRDA) that you give careful consideration to the approaches we implemented. We recommend that a federal program to assist us in such efforts be authorized. We urge you to view emergency preparedness in the broadest sense. It must include not only those things traditionally associated with emergency preparedness, such as levee strengthening and material stockpiling, but also efforts to diversify water supplies (e.g. recycling and desalination), increase the reliability of those water supplies (e.g. inter and intra-system connections), and bolster infrastructure (e.g. seismic upgrades). WRDA funding has been integral in helping us develop alternative water supplies through recycling. We view WRDA as an important vehicle moving forward to develop effective federal policy to support local emergency preparedness efforts.

In addition to authorizing and appropriating federal resources, we believe a coordinated state and federal response plan is vital to ensure an effective and efficient rapid emergency response capability. To the extent possible, the plan should empower field staff so that response efforts can be immediate. In addition, consideration of levee improvement funding to meet U.S. Army Corp. of Engineers PL84-99 Standard to reduce the risk of failures and funding for stockpiling emergency response materials is recommended.

#### CLOSING

Mr. Chairman and members of the subcommittee, this concludes my formal testimony. I would be pleased to answer any questions you may have. On behalf of the East Bay Municipal Utility District, thank you for the opportunity to discuss this important matter and we look forward to working with you and your colleagues as you continue to examine emergency preparedness in the Delta.

**Statement for the Record**

*On behalf of the*

**Pacific Gas and Electric Company**

*before the*

**Committee on Transportation and Infrastructure  
Subcommittee on Economic Development, Public Buildings, and  
Emergency Management**

*of the*

**United States House of Representatives**

**August 16, 2012**

Chairman Denham, Ranking Member Norton and members of the Subcommittee, Pacific Gas and Electric Company (PG&E) appreciates the opportunity to submit a statement for the record for this hearing on "California's Sacramento-San Joaquin Delta: Planning and Preparing for Hazard and Disasters."

PG&E applauds the time and consideration this Subcommittee has given and continues to give to a matter that is so important to communities, first responders, and other emergency services personnel, nationwide. We also want to thank you and members of the House Transportation and Infrastructure Committee for working in a bipartisan manner to pass the recently enacted pipeline safety bill, the "Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011" (now Public Law 112-90). This is an important piece of legislation that serves as another positive step forward for greater pipeline safety and emergency response efforts.

PG&E is one of the largest combined natural gas and electric utilities in the United States. Headquartered in San Francisco, with approximately 20,000 employees, the company provides natural gas and electric service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California.

PG&E's extensive natural gas system integrates approximately 42,000 miles of natural gas distribution pipeline and 5,800 miles of natural gas transmission pipeline.

Since the tragic pipeline accident that occurred in San Bruno, California in 2010, we have made fundamental changes to the operations and management practices throughout our gas organization. Some of the more critical actions we have taken are also contained in provisions that were included in Public Law 112-90, which is currently being implemented by the Pipeline and Hazardous Materials Safety Administration (PHMSA). Some actions taken through July 2012 include, among other things, completing the Maximum Allowable Operation Pressure validation of all 2,088 miles of high consequence area (HCA) pipelines, validating 2,300 miles of non-HCA pipelines, automating 44 valves, strength testing and verifying the strength test pressure records for more than 292 miles of pipeline, and implementing enhanced emergency response procedures, protocols and equipment, allowing us to identify and respond to potential emergencies quicker and coordinate more seamlessly with local first responders and others in the community.

PG&E recognizes that, in order to be a leader in the safe operation of our natural gas system, we must be a leader in emergency response preparedness and actions. To this end, we have revamped our policies, procedures, and protocols to: 1) identify and respond to potential emergencies faster; 2) ensure that first responders have the information they need to fully prepare and respond to natural gas emergencies; 3) proactively develop and implement coordinated emergency response procedures and fully utilize new technologies; 4) train our operating personnel on such procedures; and 5) verify that the training is being executed effectively.

To date, we have taken a number of actions to immediately enhance our emergency response efforts regarding our natural gas system, including making significant progress toward implementing the recommendations of the National Transportation Safety Board (NTSB). More specifically, we have seen measureable progress on the following NTSB recommendations: 911 Notification Processes (P-11-13), emergency response

procedures for large-scale emergencies on transmission lines (P-11-25), and efforts to ensure continuous improvement of our public awareness programs (P-11-31).

The remainder of the statement provides examples of specific actions PG&E has taken and continues to take to advance our emergency response efforts.

### **Gas Emergency Response Plan**

Since the San Bruno tragedy, PG&E has gone to great lengths to improve our emergency response procedures, including carefully consulting with fire and police departments and key emergency response officials. The result of these activities is our newly implemented Gas Emergency Response Plan (GERP). Among the key features, GERP sets preparedness expectations, defines levels of emergency triggers, establishes emergency response priorities, creates delegation of command authority, and sets capabilities for both gas transmission and distribution.

The purpose of the GERP is to provide for a streamlined emergency response process that identifies clear command and role responsibilities, improves communication and coordination within PG&E and between first responders, and better engages and informs our customers and communities.

Some examples of specific improvements we have made to date, include:

- Development of emergency response plans to reflect current best practices and training of employees on these plans;
- Revamping of our Supervisory Control and Data Acquisition (SCADA) system to provide operators in PG&E's Gas Control Center with the tools and training to identify and improve response time in the event of a pipeline rupture;
- Participation in the American Gas Association's Mutual Assistance Program to better leverage best practices and industry support should a major incident occur;

- Deployment of Incident Command System (ICS) training to all PG&E Gas Operation emergency management personnel to ensure we are communicating consistently with first responders; and
- Development of gas emergency pipeline safety video for use in training first responders, developers, excavators, and community leaders on gas safety and what to do in case of an emergency.

#### **Outreach and Coordination with First Responders and Communities**

One aspect of our GERP on which we would like to focus is the creation of our Emergency Preparedness and Public Awareness Team (the Team). The Team is responsible and accountable for providing pipeline and general safety training to first responders, while ensuring public awareness and understanding of such efforts. As part of the Team, PG&E has recently hired eight Senior Public Safety Specialists to serve as the primary interface with the local and state first responders for training, exercise, and tabletop activities involving pipeline safety.

To compliment these efforts, PG&E purchased six mobile emergency operations vehicles to enhance communications within PG&E and between emergency response personnel. We also launched a first responder web site portal so the public can access training materials, general mapping locations of our gas pipeline system, instructional DVDs, and more. An additional online portal has been developed as a resource to registered first responders who wish to access more detailed information on GERP, our gas transmission assets, and key points of contact within PG&E's Gas Operations team.

Additionally, PG&E has completed the following training activities:

- Conducted training exercises with public officials and first responders regarding gas curtailment scenarios and effective ways to prepare for such events, including hosting approximately 18 first responder training workshops in and around the Delta area;

- Increased the number of educational and interactive sessions with first responders in an effort to prepare for gas-related emergencies, including in-person meetings, formal presentations, and direct correspondence with the counties of Amador, Contra Costa, Sacramento, San Joaquin, Solano, and Yolo; and;
- Established a first responder pilot training program with the cities of San Francisco and Fremont on sharing emergency response information.

Other emergency preparedness activities, include:

- Developed contact lists for all local first responders (~1800) to facilitate future communication and notifications;
- Provided maps, Geographic Information System (GIS) data, and other relevant information on our gas operations to first responders;
- Conducted a Joint California ISO/California Public Utilities Commission (CPUC) Gas Curtailment Exercise; and
- Established and implemented a 911 Notification Process.

PG&E also continues robust outreach with community leaders, local, state and federal government officials, schools, and agricultural and rural community members to educate them about informative emergency response resources available to them.

Some of the activity related to community education and outreach, includes:

- Sent multiple informational bill inserts to all customers and all new customers within the first 90 days of service, reaching over 4.9 million customer accounts;
- Mailed more than 2.5 million letters in 2011 to customers informing them that their homes and businesses are within 2,000 feet of a PG&E gas transmission pipeline, and provided them with information regarding natural gas safety. In the

Delta Region of PG&E's service territory, approximately 88,000 customers received these proximity letters;

- Established a customer escalation process to respond to inquiries about the pipeline proximity letter and related work details;
- Conducted outreach to educate and update customers who live within 500 - 1,000 feet of a gas transmission pipeline segment that was scheduled to be tested, replaced, or inspected. This entailed sending out informational letters and attending open houses in communities where PG&E was performing the work;
- Prepared press releases communicating key pipeline safety messages including "Call 811 Before You Dig;"
- Corresponded with Homeowner's Associations regarding gas safety;
- Hosted and attended more than 50 open house and community events in 33 cities with customers;
- Worked with schools in our service area to teach over 27,000 children about gas and electric safety;
- Participated in the formation of Pipeline Operators Safety Partnership with 16 other pipeline operators; and
- Hosted a booth at the Fire Department Instructors Conference in April, which had more than 30,000 fire fighters in attendance.

PG&E is also scheduled to be in the cities of Red Bluff, Grass Valley, Victorville, Cordelia, Ripon, Mojave, Modesto, and others in the coming weeks and months ahead to participate in first responder workshops with community officials. And, finally, we plan to conduct a field exercise on the McDonald Island Storage facility later this year, which will include first responders.

### PG&E's Pipeline Safety Enhancement Plan

The State of California is continuing to work to codify the most aggressive pipeline safety standards nationwide, and we are wholly supportive of those efforts. As part of its pipeline safety efforts, the CPUC directed the state's investor-owned utilities to submit plans to improve the safety and operations of their natural gas systems. On August 26, 2011, PG&E submitted the Pipeline Safety Enhancement Plan (PSEP), which represents a clear break from the way California and its utilities approached pipeline safety in the past, and the way it will be approached in the future.

As part of this plan, PG&E proposes to:

- **Pipeline Modernization:** Assure every gas transmission pipeline operates at or below proven, tested and verified safe operating pressure, margin of safety.
- **Valve Automation:** Facilitate emergency response to minimize the potential consequences of natural gas fueled fire by isolating segments quickly.
- **Pipeline Records Integration:** Reflect the NTSB's recommendation for a new standard of "traceable, verifiable and complete" gas transmission records in an electronic format.
- **Interim Safety Enhancement Measures:** Enhance public safety of PG&E's gas transmission system prior to completing the work proposed.
- **Emergency Response:** Develop and exercise a statewide integrated plan that can be carried out effectively and efficiently with first responders to improve public safety.

PG&E believes that emergency response and preparedness is such a key component of enhancing the overall safety of our system that we chose to include it as part of our PSEP filing. While the CPUC has yet to make a final decision regarding PSEP, we have not waited to take action.



### **Improved Emergency Response Rates**

The steps we have taken as part of the GERP and these other efforts have resulted in PG&E making tremendous progress to date regarding how efficiently and quickly we respond to customer and 911 agency calls regarding gas concerns and/or emergencies. When calls are received by our 24-Hour Emergency and Customer Service Center about a reported gas emergency, the times by which PG&E responds to these calls has been reduced significantly since 2011. For example, in 2011, on average, we arrived on the scene within 30 minutes of a call approximately 58 percent of the time and within 60 minutes of a call approximately 97.6 percent of the time. By July 2012, we arrived on the scene within 30 minutes of a call 83 percent of the time and within 60 minutes of a call 99.3 percent of the time.

The current response rates are a significant improvement over past performance and a tangible example of our commitment to improving our gas operations, regaining the trust of our customers, and becoming an industry leader.

### **Conclusion**

PG&E is taking steps everyday to ensure that emergency response and preparedness is embedded in our culture and our operations. A major part of those efforts entail implementing the NTSB's recommendations surrounding emergency response, as well as the initiatives we are undertaking as part of our GERP and PSEP. Such actions have helped to substantially improve our emergency response rates, our information sharing efforts, and the training programs and tools we are providing to both our employees and the emergency response community. With the continued implementation of public safety education programs and enhanced outreach, PG&E expects improved coordination during emergencies, faster response to potential emergencies, improved restoration times following an incident, line-of-sight accountability for prevention, preparedness and response performance, and a more informed and safer citizenry.

We remain committed to taking all necessary steps to ensure that emergency response personnel and all communities within our service area can improve awareness of

pipeline risks and be prepared to respond to any related incidents. We look forward to continuing our efforts and working with the Congress to further address these important issues, as we strive to operate the safest natural gas system in the nation.

Again, PG&E appreciates the opportunity to provide comments for the record on emergency response and preparedness.

Thank you.